FOOD DISTRIBUTION FACILITIES FOR WILKES-BARRE AND SCRANTON, PENNSYLVANIA

By Richard K Overheim, J. N Morris, Jr., H. R Smalley, C. F Stewart,
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PREFACE AND ACKNOWLEDGMENTS

In this report wholesale food distribution facilities are described in the Wilkes-Barre, Scranton area of northeastern Pennsylvania and plans for modern and efficient facilities are recommended.

Appreciation is extended to the members of the food distribution firms and related wholesalers for their help in supplying the basic information on which this report is based. Those cooperating in this study included the Wilkes-Barre Wholesale Merchants Association, the Redevelopment Authorities of Wilkes-Barre and Scranton, the Chambers of Commerce of Wilkes-Barre, Scranton, and Pittston, the Economic Development Council of Northeastern Pennsylvania, the Pennsylvania Power and Light Company, and the U.S. Department of Housing and Urban Development.

Special appreciation is extended to Leon E. Case, Jr., executive director, Redevelopment Authority of Wilkes-Barre, for assisting in many details relating to the study and for providing office space and clerical help; Thomas Dombroski, business development adviser, Redevelopment Authority of Wilkes-Barre, for his cooperation and assistance to the field survey team; Edgar J. Lashford, executive vice president, Greater Wilkes-Barre Chamber of Commerce, for help during planning phases of the field study; A. P. Santucci, president, Wilkes-Barre Wholesale Merchants Association, for guiding industry participation in the study; Robert E. Shepherd, Economic Development Council of Northeastern Pennsylvania, for organizing regional participation in the study; and Aubrey Vose, extension agent, Luzerne County Agriculture Extension Service, for data concerning local farm production

Others who provided background information were Donald Harris, executive director, Scranton Redevelopment Authority, Ronald P. Toth and Anthony Rometi (SRA), Willis W. Jones, president, and Kenneth Dalph, Greater Scranton Chamber of Commerce, Donald N. Stocker, manager, Pennsylvania Power and Light Company, Vincent T. O'Hara, Greater Pittston Chamber of Commerce, and Walter Valentine, Department of Housing and Urban Development, Philadelphia, Pa.

This study was conducted under the general supervision of Kenneth H. Brasfield, formerly Chief, Marketing Facilities Development Branch, Transportation and Facilities Research Division, Agricultural Research Service.

CONTENTS

Page

- Summary 1
- Introduction 2
- Economic factors affecting food marketing 3
- Importance of agriculture 3
- Type, number, and volume of wholesale food firms and warehouses 4
  - Wilkes-Barre 6
  - Scranton 6
- Wholesale food facilities in Wilkes-Barre 6
  - Fresh fruits and vegetables 6
  - Meat and meat products 7
  - Groceries 7
  - Dairy and poultry products 10
  - Frozen foods 10
  - Fluid milk products 11
- Wholesale food facilities in Scranton 15
  - Fresh fruits and vegetables 17
  - Meat and meat products 18
  - Groceries 18
  - Dairy and poultry products 19
  - Fluid milk products 20
- Source of supplies in Wilkes-Barre 20
- Source of supplies in Scranton 21
- Distribution of food products in Wilkes-Barre 22
- Distribution of food products in Scranton 23
- Need for new facilities 23
- Proposed facilities and acreage required for a wholesale food distribution center 24
  - Fresh fruits and vegetables 27
  - Meat and meat products 30
  - Groceries 32
  - Dairy, poultry products, and frozen foods 32
  - Refrigerated storage 34
  - Fluid milk products 34
- Floorspace in proposed food distribution center 37
  - Streets and parking areas 37
  - Farmers market 37
  - Expansion areas 37
  - Central energy plant 37
  - Solid waste disposal 37
  - Acreage required 37
- Selecting a site for a wholesale food distribution center 40

Page

  - Crestwood Industrial Park 40
  - Greater Wilkes-Barre Industrial Fund site 40
  - Flick estate and adjacent property 40
  - Interstate Industrial Park 40
  - Bear Creek site 40
  - Turnpike Industrial Park 44
  - Barnum Industrial Park 44
  - Hampton Township Industrial Park 44
  - Ivy Industrial Park 45
- Operating and financing a food distribution center 49
  - Management 49
  - Methods of financing 49
- Estimated investment in land and facilities 52
  - Land 52
  - Facilities 52
- Estimated construction costs 53
  - Fresh fruit and vegetable section 53
  - Meat and meat products section 54
  - Grocery section 54
  - Dairy and poultry products section 54
  - Refrigerated storage section 54
  - Fluid milk products section 54
- Estimated annual costs and revenue requirements 55
  - Management 55
  - Insurance 55
  - Maintenance and repairs 55
  - Real estate taxes 55
  - Debt service 55
- Estimated annual revenue required 58
- Source of revenue 59
- Benefits and conclusions 60
- Appendix I 63
  - Guides to planning interior operational layouts 63
  - Recommended handling systems 63
- Appendix II 64
- Appendix III 65
  - Industrial Development Authorities Act 65
  - Criteria for approval of application 65
- Appendix IV 67
  - Buildings and facilities cost data 67
  - Associated construction costs 67

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SUMMARY

Potential savings may be derived and costs can be minimized with the development of a wholesale food distribution center in the Wilkes-Barre, Scranton area of Pennsylvania. With new facilities, estimated annual savings of $195,000 may be realized in handling costs and $338,000 in spoilage, deterioration, breakage, and shrinkage costs. Refrigeration costs can be minimized through using a centralized refrigeration system. With one central refrigeration system for all the wholesalers, the total refrigeration cost can be $340,000 less than with individual systems for each wholesaler.

Other savings probably would be made by four fluid milk firms as well as by one food chain and one large frozen food processor, who are contemplating expansion of present operations. Rental costs could increase from about $1,050,000 to about $1,240,000 depending on the method of financing used. However, wholesalers will eventually own their own facilities and are building equity in the process.

This report provides guidelines for the location of 52 wholesale firms in a wholesale distribution center to serve the needs of Wilkes-Barre, Scranton, and the surrounding area. Twenty-five firms in Wilkes-Barre and six in Scranton are in redevelopment areas. A well-planned wholesale food distribution center will provide the facilities needed to handle food efficiently and maintain the quality of food products—both now and in the future.

In 1969, 83 independent wholesale food firms and seven food-chain warehouses in the area received nearly 503,000 tons of food. Of this, about 58 percent arrived by truck and 42 percent by railroad. About 32 percent of the tonnage was distributed within the metropolitan areas of Wilkes-Barre and Scranton, 25 percent in other parts of Pennsylvania, and the remaining 43 percent outside the State. Approximately 12 percent of this food originated in Pennsylvania. Meat and meat products constituted the greatest tonnage from within the State and fresh fruits and vegetables the second largest.

The 52 independent food wholesalers needing new facilities handled about 131,000 tons of food in 1969. Some of the cost of moving this tonnage through their facilities was excessive because of the type or location of wholesalers' facilities. Many of the buildings were not designed for food-handling operations, nor could they be adapted for use of modern materials-handling equipment. Many facilities did not have direct rail connections nor did they have docks at truck-bed height. Many firms operated in multistory facilities that required elevators to move food products. Some wholesale firms were located on narrow streets, adding to the cost of receiving and distributing food. These factors also affected the amount of spoilage that occurred.

To accommodate the wholesalers needing new facilities, the following buildings are suggested: Five multiple-occupancy buildings containing 66 units, with 198,000 square feet of first floor space, and 13 single-occupancy buildings containing 311,800 square feet of first floor space for the following

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[1] Richard K. Overheim, project leader; J. N. Morris, Jr., industrial engineer—*groceries and corporate chainstores and affiliated wholesalers;* H. R. Smalley, marketing specialist—*meat and related products;* C. F. Stewart, marketing specialist—*dairy products and fluid milk plants;* R. A. Thompson, agricultural engineer—*cost and site analysis;* J. J. Karitas, marketing specialist—*fresh fruits and vegetables and poultry and eggs;* C. L. Goulston, industrial engineer—*refrigeration*

wholesale firms. Fresh fruits and vegetables, 17, meat and meat products, 18, groceries, nine, dairy and poultry products, two, with space provided for a frozen food processing firm, refrigerated storage, one and fluid milk products, four. In addition, 39 acres of land are provided for development of a food-chain distribution warehouse and allied industry expansion.

These facilities, with space for future expansion and for other wholesale firms and allied industries that may wish to locate in the center, would require about 125 acres of land. Nine sites are considered representative of those in the area. Crestwood Industrial Park, Greater Wilkes-Barre Industrial Fund area, Flick estate and adjacent property, Interstate Industrial Park, Bear Creek area, Turnpike Industrial Park, Barnum Industrial Park, Hampton Township Industrial Park, and Ivy Industrial Park.

Investment costs of land and facilities, assuming a site value of $7,000 per acre, were estimated as follows: Fresh fruits and vegetables, $4,008,000; meat and meat products, $5,756,000; groceries, $1,523,000; dairy and poultry products, $246,000, refrigerated storage, $2,250,000, and fluid milk products, $545,000. Total investment cost for the wholesale distribution center amounted to $14,328,000, excluding facilities for a food-chain warehouse and expansion area and a large frozen food processing firm.

If the distribution center is financed with funds obtained through the Industrial Development Authorities Act, rentals or ownership costs for the various types of facilities, ranging from $2.64 to $4.32 per square foot, would cover all operating costs of the market and pay for the facilities in 25 years. This example does not preclude the possibility that a private developer might construct facilities on a leasehold arrangement. Regardless of the financing method projected, operating savings could be realized only if modern materials-handling procedures are used.

In addition to reducing marketing costs, benefits could accrue to farmers, retailers, wholesalers, market employees, transportation agencies, consumers, and the area. Rail and truck operations would be simplified; quality of food would be easier to maintain, sanitation problems would be reduced, the tax base and revenues could be increased through better use of the present land areas occupied by wholesale food facilities, and the value of land used for and adjoining the new development would increase.

INTRODUCTION

The Redevelopment Authority and the Chamber of Commerce of Wilkes-Barre and food industry representatives requested assistance from the U.S. Department of Agriculture in planning new facilities for food firms being displaced by urban renewal projects and for other firms that may face eventual relocation as a result of pending urban renewal plans. The study was given impetus by an urban renewal project in Wilkes-Barre, which will rejuvenate part of the downtown area. This project displaced a group of fresh fruit and vegetable wholesalers, the only market concentration of its kind in the city.

At this time, the Economic Development Administration, U.S. Department of Commerce, approved a study on the feasibility of establishing distribution complexes in the seven-county area served by Wilkes-Barre and Scranton. These complexes, if determined feasible, would be oriented toward serving the east coast market and would aid in the economic rebirth of the area. The E.D.A.-approved study will emphasize nonfood items.

Since coordination of the two studies was needed, the Economic Development Council of Northeastern Pennsylvania requested that the U.S. Department of Agriculture expand its study to include all food firms in the seven-county area in Pennsylvania, because redevelopment programs in other cities of the area have been and are displacing food distributors. These distributors serve the entire area and nearby States as well. In addition, the location of Wilkes-Barre, Hazelton, and Scranton and the modern highway network tying them to adjacent rural areas and other cities in the East strongly emphasize the need for an area approach to the food distribution study. Upon demonstrated interest from industry, civic, and government officials, it was agreed to expand the U.S. Department of Agriculture study to the seven-county area.

The former Transportation and Facilities Research Division of the Department in the fall of 1970 undertook field work in the Wilkes-Barre area. Field work in Scranton and the seven-county area began early in 1971. All data relating to the amount of each commodity received by the wholesalers and the cost of handling the products from the point of initial receipt through the various wholesale channels were obtained by personal interviews with the wholesalers. Additional statistical data and support material were obtained from the Redevelopment Authority of Wilkes-Barre, the Economic Development Council of Northeastern Pennsylvania, the Chambers of Commerce in Wilkes-Barre and Scranton, and officials of city, county, State, and Federal Governments. The data were obtained for calendar year 1969, the latest available data at the time of the study.

The study had the following objectives:

- To analyze the present wholesale food marketing situation in Wilkes-Barre, Scranton, and the seven counties in northeastern Pennsylvania and to determine whether the products handled by firms needing new facilities are of sufficient volume and variety to provide a nucleus for a new wholesale distribution center.
- To determine selected measurable costs of handling food products through firms needing new facilities.
- To develop a plan for new facilities that would meet immediate needs and provide for orderly future growth and to evaluate possible sites for efficient wholesale food marketing.
- To estimate the costs of land, construction, and operating expenses for the new facilities.
- To estimate probable savings and other benefits from suggested improvements.

ECONOMIC FACTORS AFFECTING FOOD MARKETING

The total population in the seven-county area, which includes Carbon, Lackawanna, Luzerne, Monroe, Pike, Schuylkill, and Wayne Counties, was 873,891 in 1970.[2] The Economic Development Council of Northeastern Pennsylvania in a report analyzing the 1970 population shows a decline during 1960-70 for the seven-county area of 10,000, which is only a fraction of the decrease recorded during 1950-60.

Northeastern Pennsylvania has four important urban areas toward which the district economy tends to gravitate. In order of present population size, these are Wyoming-Lackawanna Valley area, Hazleton-West Hazleton area, city of Pottsville, and Greater Stroudsburg area.[3]

These areas are shown in figure 1.

The Wyoming-Lackawanna Valley area, which includes Wilkes-Barre and Scranton, contains by far the largest population. In 1960 the estimated population of this area, as outlined in figure 1, was 452,553. The Hazleton-West Hazleton area had 38,334 people, Pottsville 21,659, and the Greater Stroudsburg area 26,011.[4]

In addition to a road network, which makes accessible almost every part of the area to automobiles or truck, Interstate Highways 80, 81, and 84 crisscross the seven-county area.

Several airports are within the seven-county area, only two of which are presently served by scheduled airlines. The major airport is halfway between Wilkes-Barre and Scranton.

The rail network, which was built to haul anthracite coal, is still largely intact.

In 1967, wholesale establishments dealing in groceries and related products in Wilkes-Barre, Hazleton, and Scranton had annual sales of over $187 million.[5]

IMPORTANCE OF AGRICULTURE

Agriculture constitutes a relatively small proportion of economic activity within the area. In 1964, sale of agricultural and livestock products from farms within the seven-county area amounted to $47 million.[6] The average income among the 5,348 farms estimated to be operating was about $8,700 per farm.

The overall prospect for agriculture in the area

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[2] Economic Development Council of Northeastern Pennsylvania. *Where the People Are, a Report Analyzing the 1970 Census of Population.* 12 pp. Avoca, Pa. November 1971.

[3] Economic Development Council of Northeastern Pennsylvania. *Overall Economic Development Program for the Northern Pennsylvania Development District.* 128 pp. Wilkes-Barre, Pa. 1967.

[4] See footnote 3.

[5] U.S. Bureau of the Census. *Census of Business. Wholesale Trade Area Statistics.* [n.p.] U.S. Government Printing Office, Washington, D.C. 1967.

[6] Economic Development Council of Northeastern Pennsylvania. *Overall Economic Development Program Report.* 128 pp. Wilkes-Barre, Pa. 1967.

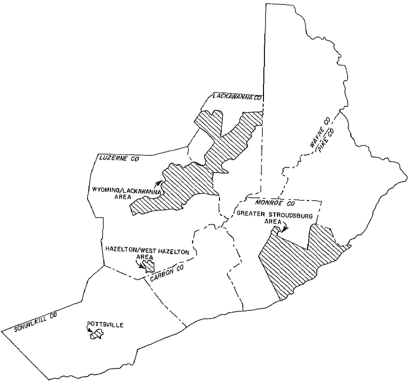

Figure 1.—Four major population areas in the seven-county area of northeastern Pennsylvania.

parallels that of the Nation. Fewer farmers will produce bigger and better crops on larger farms using improved techniques, more fertilizer, and a vastly expanded inventory of labor-saving machinery and equipment.

TYPE, NUMBER, AND VOLUME OF WHOLESALE FOOD FIRMS AND WAREHOUSES

Food moving through the Wilkes-Barre, Scranton area is handled by 90 firms—83 independent wholesale firms and seven food-chain warehouses (table 1).

Independent wholesale firms have one or more wholesale facilities and sell directly to outlets they do not own or control. These firms include 23 for fresh fruits and vegetables, 34 for meat and meat products, 17 for groceries, six for dairy and poultry products, and three for frozen foods. In addition, 17 fluid milk products firms are included in a separate category.

The seven food-chain warehouses include (1) corporate chainstores, served from their warehouse facilities; (2) retail-owned cooperatives, which are wholesale food facilities owned by the retailers served by the cooperatives, and (3) voluntary group wholesale firms, which are independent and have affiliated with a group of independent retail stores to serve them and advertise for them under a common name

The total volume of direct receipts handled by the independent wholesale firms and food-chain warehouses in 1969 was nearly 503,000 tons

Table 1 - Number of wholesale food firms and estimated volume of direct receipts by method of transportation, Wilkes-Barre and Scranton

Type of wholesale firm and location	Wholesale firms	Direct receipts[1]		
		Rail	Truck	Total
	Number	*Tons*	*Tons*	*Tons*
Independent:				
Fresh fruits and vegetables [2]				
Wilkes-Barre	11	18,261	26,193	44,454
Scranton	12	38,670	57,082	95,752
Total	23	56,931	83,275	140,206
Meat and meat products [2]				
Wilkes-Barre	16	3,389	23,546	26,935
Scranton	18	4,064	26,378	30,442
Total	34	7,453	49,924	57,377
Groceries [2]				
Wilkes-Barre	8	570	12,957	13,527
Scranton	9	1,712	16,395	18,107
Total	17	2,282	29,352	31,634
Dairy and poultry products:[2] [3]				
Wilkes-Barre[1]	3	0	922	922
Scranton	3	0	59,050	59,050
Total	6	0	59,972	59,972
Frozen foods:				
Wilkes-Barre	3	550	6,157	6,707
Scranton	---	---	---	---
Total	3	550	6,157	6,707
All commodities:				
Wilkes-Barre	41	22,770	69,775	92,545
Scranton	42	44,446	158,905	203,351
Total	83	67,216	228,680	295,896
Other[5]	7	143,500	63,250	206,750
Grand total	90	210,716	291,930	502,646

[1] Excludes transfers among wholesale firms.

[2] Includes some frozen products.

[3] Excludes fluid milk products. See p. 11 for details concerning fluid milk products.

[4] Includes 2 frozen food wholesale firms and 1 wholesale fish firm. Volume combined to prevent disclosure of individual firm data.

[5] Includes 2 food-chain warehouses within Luzerne County and 5 within Lackawanna County Volume presented for comparative purposes to show total food volume received in the area.

Wilkes-Barre

In the Wilkes-Barre area, 41 independent wholesale food firms were included in the study. In addition, four food chains operated food stores in Luzerne County. Two of the chainstore organizations supplied their stores from warehouses located within Luzerne County and two from warehouses outside the county. Food wholesalers in the counties surrounding Luzerne were also interviewed. Generally they were not interested in relocating their facilities. Their reaction was that centralized facilities in the Wilkes-Barre, Scranton area would be too far from their customers and too close to consider building secondary facilities.

The volume of direct receipts handled by independent wholesale firms in the Wilkes-Barre area in 1969 was nearly 93,000 tons (table 1). The volume of product handled by one wholesale fish firm is included with that handled by two frozen food wholesale firms and the volume of one poultry wholesale firm is included with that of two dairy wholesale firms to prevent the disclosure of individual firm data.

In addition to the direct receipts, some food products are transferred among wholesalers. Such transfers result from occasional inventory shortages, need for items not ordinarily in inventory, or normal movement of food commodities among firms. In 1969 about 721 tons of food products were transferred among wholesalers. Therefore total volume handled that year was 93,266 tons (92,545 + 721).

Scranton

In the Scranton area, 42 independent wholesale food firms were included in the study. In addition, seven food chains operated food stores in Lackawanna County. Five of the chainstore organizations supplied their stores from warehouses located within Lackawanna County and two from warehouses outside the county. Generally wholesalers in the counties surrounding Lackawanna were not interested in relocating their facilities.

The volume of direct receipts handled by 42 independent firms in the Scranton area was almost 203,400 tons (table 1). The frozen food volume is included by commodity or with the chain volume. The volume of product handled by two poultry wholesale firms is included with that handled by meat and meat products wholesale firms to prevent the disclosure of individual firm data.

In addition to the direct receipts, some food products are transferred among wholesalers as discussed under Wilkes-Barre. In 1969 an estimated 3,959 tons of food products were transferred among wholesalers. Therefore total volume handled that year was 207,310 (203,351 + 3,959).

WHOLESALE FOOD FACILITIES IN WILKES-BARRE

The food facilities occupied by wholesalers in the Wilkes-Barre area ranged from relatively modern one- and two-story warehouses designed for the wholesale operations conducted within them to very old multistory buildings not designed for such uses. Many of the older buildings were located in urban renewal areas. Demolition of some of the antiquated structures had already begun on the State Street project at the time of the study (fig. 2). Firms in this area have been relocated to secondary facilities. Wholesalers in older buildings at scattered locations had to use excessive amounts of labor to receive, store, and ship food products. Building construction ranged from steel and masonry to wood frame and weatherboarding.

Figure 3 shows the location of the 41 independent wholesale food firms and the two food-chain warehouses included in this study. The major concentration of food firms is near the State Street urban renewal project area and the proposed industrial park, which runs parallel to Pennsylvania Avenue. Figure 4 shows the location of wholesale food firms in these and other redevelopment project areas in Wilkes-Barre.

Fresh Fruits and Vegetables

Eleven fresh fruit and vegetable wholesale firms were in Wilkes-Barre and the surrounding area (table 1). One carlot receiver's firm occupied a two-story modern brick warehouse built specifically for its business (fig. 5). Two other firms shared

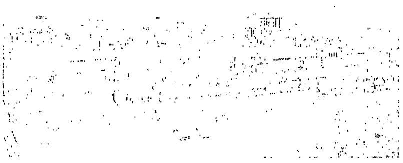

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Figure 2.—State Street urban renewal project in Wilkes-Barre, showing area that has been cleared of substandard wholesale food facilities.

space in a one-story brick warehouse with offstreet docking facilities. These were the only two substantial structures occupied by fresh fruit and vegetable wholesalers. The one-story structure was slated to be demolished because it did not conform to proposed land use of the area.

Only three of the 11 firms had rail sidings at their facilities. Most of the buildings occupied were storefront buildings, two and three stories high (fig. 6).

Modern materials-handling equipment can be utilized in the more modern buildings, but it is usually limited elsewhere because of building layout and congested conditions. Some individual firm operations were too small to warrant use of mechanized equipment.

Nine fresh fruit and vegetable firms are now located in redevelopment areas within the city. Four firms are in the proposed industrial park and five in the State Street project (fig. 4).

Seven of the fresh fruit and vegetable wholesalers rented their facilities and four owned them (table 2). The total floorspace occupied by fresh fruit and vegetable wholesalers was about 120,000 square feet, of which over 47,000 square feet of space was refrigerated and about 21,000 square feet was for dry storage.

Meat and Meat Products

Sixteen meat and meat products firms were in Wilkes-Barre and the surrounding area. Eleven of these firms primarily handled carcass and primal cuts. The remaining live wholesale firms did an extensive amount of processing for the local institutional trade. In general, processing means changing carcass meats into primal and other wholesale cuts or other prepared meat products.

Half of the meat firms were in redevelopment areas within the city and eventually must relocate. Six firms were in the proposed industrial park and two in the State Street redevelopment (figs. 4 and 7).

Thirteen of the meat operators owned their facilities and three rented (table 2). The total floorspace occupied by meat and meat products firms was about 165,000 square feet, of which over 51,000 square feet of space was refrigerated and about 66,000 square feet was for dry storage.

Groceries

Eight wholesale grocery firms were operating in Wilkes-Barre and the surrounding area. Three specialized in institutional food service operations, supplying hotels, restaurants, cafeterias, hospitals,

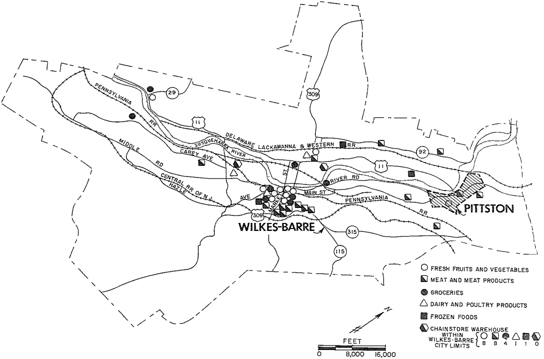

Figure 3.--Location of wholesale food firms and food-chain warehouses in Wilkes-Barre area

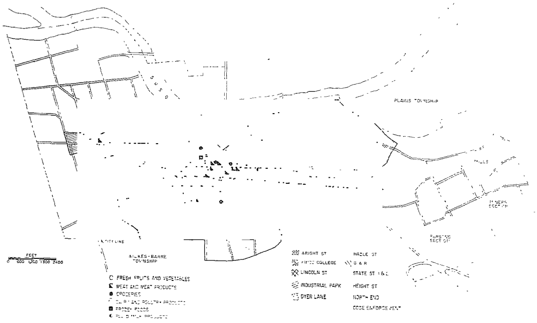

Figure 4.–Location of wholesale food firms in redevelopment areas of Wilkes-Barre

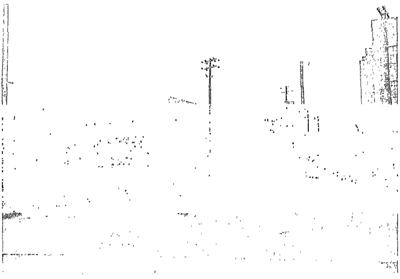

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Figure 5 —Modern wholesale produce warehouse in Wilkes-Barre

schools, and other institutions. Two were cash and carry, two were small wholesale operations that supplied unaffiliated retailers or were specialized in handling certain grocery items, and one was a national distributor.

Four of the eight grocery firms were in redevelopment areas within the city and eventually may relocate. Three firms were within the State Street redevelopment area and one was within the Heights redevelopment area (fig. 4).

Five of the grocery firms were in old multistory buildings. Low ceilings and poor layout restricted the use of modern handling equipment. Only two firms had refrigerated storage space. Only three were served by railroad house tracks. Two of the firms did not receive merchandise by rail. The remaining firms received some products by rail at team track. Some of the warehouses used by grocery firms in Wilkes-Barre are shown in figure 8.

The eight grocery firms had about 89,000 square feet of space, of which about 86,000 square feet was for dry storage (table 2). Seven firms owned their facilities and one rented.

Dairy and Poultry Products

Three wholesalers of dairy and poultry products operated in the Wilkes-Barre area (fig. 3). One firm had been displaced by a redevelopment program currently underway and is operating in a warehouse away from its former downtown location. The two dairy firms occupy one-story buildings, which were inadequate to meet their needs. One of the dairy firms is in a redevelopment area.

Total floorspace for these firms was 8,600 square feet (table 2). Refrigerated space averaged more than 350 square feet per firm. All three firms rented the facilities they occupied.

Frozen Foods

Two frozen food wholesalers and one wholesale fish firm were operating in Wilkes-Barre and the

Table 2 - Tenure status of and space used by various types of wholesale food firms, Wilkes-Barre and Scranton

Type of wholesale firm and location	Tenure status			Space occupied						
	Rent	Own	Total	Refrigerated processing area	Refrigerated hold coolers	Refrigerated hold freezers	Office and sales area	Dry storage and equipment area	Other	Total
	Number	*Number*	*Number*	*Sq ft*	*Sq. ft*	*Sq ft*	*Sq. ft*	*Sq. ft*	*Sq ft*	*Sq ft*
Fresh fruits and vegetables										
Wilkes-Barre	7	4	11	---	45,415	2,168	3,838	21,260	47,160	119,841
Scranton .	5	7	12	5,000	48,928	414	3,754	79,137	47,367	184,900
Total .	12	11	23	5,000	94,343	2,582	7,592	100,697	94,527	304,741
Meat and meat products										
Wilkes-Barre .	3	13	16	32,985	36,015	15,043	10,181	65,677	4,955	164,856
Scranton	10	8	18	34,994	33,947	22,560	16,629	53,785	8,935	170,850
Total	13	21	34	67,979	69,962	37,603	26,810	119,462	13,890	335,706
Groceries										
Wilkes-Barre	1	7	8	---	900	---	2,650	85,550	---	89,100
Scranton . .	5	4	9	12,800	1,000	300	4,700	163,200	---	182,000
Total ..	6	11	17	12,800	1,900	300	7,350	248,750	---	271,100
Dairy and poultry products:										
Wilkes-Barre	3	---	3	---	818	240	120	7,422	---	8,600
Scranton	---	3	3	12,020	5,892	592	3,092	3,027	5,820	30,443
Total	3	3	6	12,020	6,710	832	3,212	10,449	5,820	39,043
Frozen foods										
Wilkes-Barre ...	1	2	3	35,000	5,064	11,292	1,272	21,132	10,000	83,760
Scranton	---	---	---	---	---	---	---	---	---	---
Total	1	2	3	35,000	5,064	11,292	1,272	21,132	10,000	83,760
All commodities										
Wilkes-Barre	15	26	41	67,985	88,212	28,743	18,061	201,011	62,115	466,157
Scranton ..	20	22	42	64,814	89,767	23,866	28,175	299,449	62,122	568,193
Total	35	48	83	132,799	177,979	52,609	46,236	500,490	124,237	1,034,350

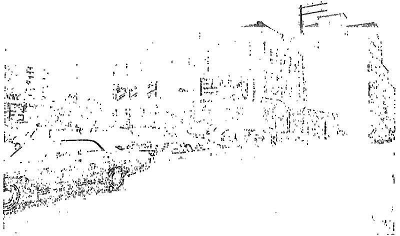
surrounding area (fig. 3) They were doing a substantial amount of processing. One firm had adequate facilities, the other firms' facilities were outmoded and space was not available for expansion The wholesale fish firm was conducting business in a redevelopment area. Local authorities were assisting this firm to relocate to suitable facilities at a downtown location (figs 4 and 9). The completed move by the fish wholesaler to his new facilities was scheduled for early 1971. These three wholesalers occupied about 84,000 square feet of floorspace (table 2). Two wholesalers owned their facilities and one rented.

Fluid Milk Products

Thirteen fluid milk products plants served the Wilkes-Barre area. Their facilities were widely scattered and generally served the sections where they were located. Some were in residential areas in old multistory buildings with little or no space for expansion. Others were located many miles from where most of their products were

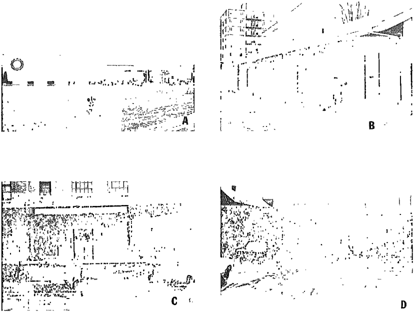
PN-3006

Figure 6.–Typical storefront facilities occupied by fresh fruit and vegetable wholesalers in Wilkes-Barre.



PN-3007

Figure 7.–Wholesale meat firm in proposed industrial park area of Wilkes-Barre.

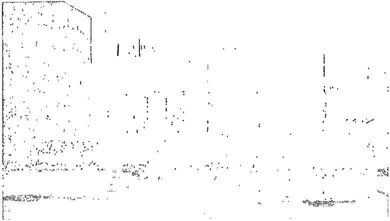


PN-3008, PN-3009, PN-3010, PN 3011

Figure 8 - Warehouses used by four grocery firms in Wilkes-Barre; *A*, Voluntary chainstore, *B*, limited-line wholesale facility, *C*, cash and carry firm, *D*, independent firm.

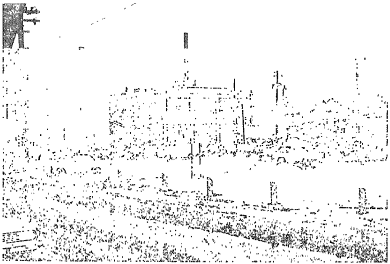
distributed. Two of the 13 firms were in redevelopment areas within the city and eventually may relocate (figs. 4 and 10). The condition of the facilities ranged from those that were well designed and efficient to those that were old and outdated. All the firms distributed products on both wholesale and retail route trucks, and a few also sold their products through retail stores at their facilities.

The total volume of products either processed or handled by the 13 fluid milk products firms is 7,066,360 gallons of fluid milk, 97,354 gallons of fruit drinks, 264,800 gallons of ice cream and soft serve mixes, 880,809 pounds of butter, margarine, eggs, and cheese, and 30,000 pounds of other dairy products. Seventy percent of the total volume of fluid milk is processed in Wilkes-Barre and the remaining 30 percent is received in processed form for distribution. Of the total volume of fruit drinks distributed, 68 percent is processed in Wilkes-Barre. Approximately 71 percent of the ice cream and soft serve mixes are processed in Wilkes-Barre. Of the total volume of butter, margarine, eggs, and cheese, 50 percent is purchased for distribution from other wholesalers in the Wilkes-Barre area, 38 percent is obtained from sources outside the Wilkes-Barre area, and 12 percent is processed by the firms.



PN-3012

Figure 9.–Wholesale fish firm in newly remodeled facilities in Wilkes-Barre



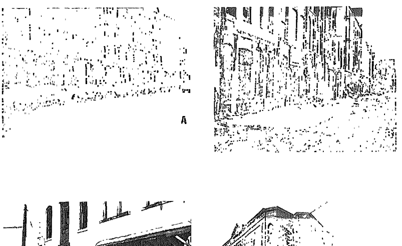
PN-3013

Figure 10.–Fluid milk products plant in proposed industrial park area of Wilkes-Barre.

WHOLESALE FOOD FACILITIES IN SCRANTON

The food facilities occupied by wholesalers in the Scranton area ranged from modern one- and two-story warehouses designed for the wholesale operations conducted within them to very old multistory buildings not designed for use by food wholesalers. Many of the older buildings were located within a two-block area on Lackawanna Avenue in downtown Scranton known as the "wholesale block." This is an urban renewal area and firms here must eventually relocate. Along with the fresh fruit and vegetable wholesalers located here were other wholesale businesses including a few grocery firms. Wholesalers in older buildings here and at scattered locations throughout the city had to use excessive amounts of labor to receive, store, and ship food products. Building construction ranged from steel and masonry to wood frame and weatherboarding.

Figure 11 shows some of the kinds of warehouses used by food firms in the Scranton redevelopment area. Figure 12 shows the location of the 42 independent food firms and five food-chain warehouses included in this study. The major concentration of food firms is in the "wholesale block" area and in the Keyser Valley Industrial Park where several



PN-3014, PN-3015, PN-3016, PN-3017

Figure 11.—Warehouses in redevelopment area on Lackawanna Avenue in Scranton: *A*, Old multistory buildings occupied primarily by fresh fruit and vegetable wholesalers; *B*, antiquated facilities scheduled to be demolished; *C*, rear loading area of old fresh fruit and vegetable stores; *D*, multistory building used by grocery firm.

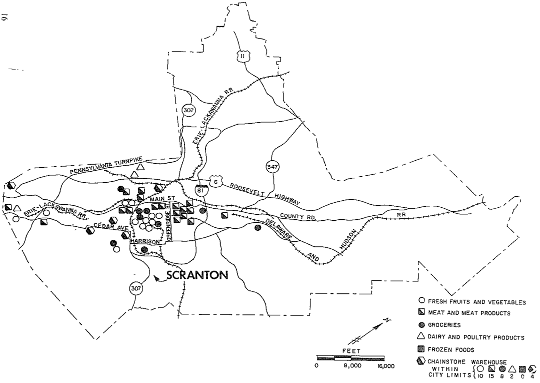


Figure 12.–Location of wholesale food firms and food-chain warehouses in Scranton area.

Scranton food firms have been relocated as a result of previous efforts to improve wholesale food distribution in the area.

Fresh Fruits and Vegetables

Twelve fresh fruit and vegetable wholesale firms were in Scranton and the surrounding area (fig. 12). Six firms occupied buildings on the "wholesale block," a redevelopment area. All these facilities were built before 1900. This area will be redeveloped and all firms here eventually must relocate. Two firms were located adjacent to the redevelopment area in facilities that were also old and inefficient. Two firms located elsewhere in the city included one carlot receiver, who occupied a new warehouse built specifically for his business. This is one of the most modern buildings of its kind in the area (fig. 13). The other is an institutional wholesale firm located outside the downtown market area but within the city. The two remaining wholesale operations are outside the city.

Seven of the fresh fruit and vegetable wholesalers owned their facilities and five firms rented (table 2). Total floorspace occupied by fresh fruit and vegetable wholesalers was 184,900 square feet, of which over 54,000 square feet was refrigerated and about 80,000 square feet was for dry storage and equipment.

PN-3018, PN-3019, PN-3020

Figure 13.—New modern storage facilities in Keyser Valley Industrial Park, Scranton. *A*, Fresh fruit and vegetable warehouse; *B*, voluntary chainstore warehouse; *C*, cooperative chainstore warehouse.

Meat and Meat Products

Eighteen meat and meat product firms were in Scranton and the surrounding area (fig. 12). Six of them handled primarily carcass and primal cuts. Twelve did an extensive amount of processing for the local institutional trade.

Five of the meat firms included in the study were in redevelopment areas within the city and eventually may relocate. Figure 14 shows meat and meat product firms in Scranton.

Ten of the meat firms rented their facilities and eight owned them (table 2). The total floorspace occupied by meat and meat product firms was about 171,000 square feet, of which over 91,000 square feet was refrigerated and about 54,000 square feet was for dry storage.

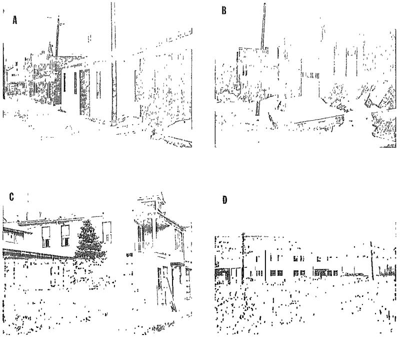
Groceries

Nine wholesale grocery firms were operating in Scranton and the surrounding area at the time of this study (fig. 12). Three specialized in institutional food service operations, supplying hotels, restaurants, cafeterias, hospitals, schools, and other institutions; three were cash and carry, and three were national distributors or food manufacturers. Figure 15 shows four warehouses used by wholesale grocery firms in Scranton.

Three of the nine grocery firms were located in

PN-3021, PN-3022, PN-3023, PN-3024

Figure 14.—Facilities used by four wholesale meat firms in Scranton: *A* and *B*, Independent meat purveyors; *C*, independent meat boner and processor; *D*, independent meat fabricator and processor.



PN-3026, PN 3027, PN-3028, PN-3029

Figure 15.- Warehouses used by four wholesale grocery firms in Scranton: A, independent grocer; *B*, local distributor for national food manufacturer; *C*, specialized food processor; *D*, new institutional grocer.

redevelopment areas within the city. One of them had new warehouse facilities under construction but had not yet moved into them at the time of this study. The other two firms may eventually relocate.

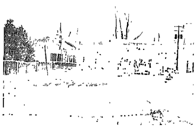
Four of the grocery firms were located in old multistory buildings. Low ceilings and poor layout restricted the use of modern handling equipment. Only two of the nine firms had refrigerated storage space. Only two firms were served by direct rail. Five of the firms did not receive merchandise by rail. The other two firms received some products by rail at team tracks.

The nine grocery firms had 182,000 square feet of space, of which 163,000 was for dry storage (table 1). Four firms owned their facilities and five rented them.

Dairy and Poultry Products

Three wholesalers of dairy and poultry products operated in the Scranton area (fig. 12). Two firms were large processors and the other was a poultry and egg wholesaler. None of the firms are being displaced by pending urban renewal plans. Figure 16 shows a poultry processing facility in Scranton. Two of the firms occupied modern facilities and the other was modernizing its facilities.

Total floor space occupied by these firms was about



PN-3030

Figure 16.—Poultry processing facility in Scranton

30,500 square feet (table 2). Refrigerated space averaged 6,168 square feet per firm. All three firms owned their facilities.

Fluid Milk Products

Four fluid milk products plants serve the Scranton area. Two are within the city, one is in the suburbs, and the other outside the area. This last plant maintains a distribution outlet in Scranton. Those within the city are housed in old multistory buildings located on narrow congested streets with limited space for expansion. The suburban plant and the distribution outlet are in primarily residential areas and are housed in single-story buildings. The firms are not located in redevelopment areas and are not considering a move at this time.

The total volume of products either processed or handled by these four firms is 6,664,140 gallons of fluid milk, 206,974 gallons of fruit drinks, 90,410 gallons of ice cream and soft serve mixes, 1,090,506 pounds of butter, margarine, eggs, and cheese, and 61,856 pounds of other dairy products. The total volume of fluid milk is processed by the firms in Scranton; 62 percent is distributed in the Scranton area and 37 percent outside the area. Most of the fruit drinks and approximately 71 percent of the ice cream and soft serve mixes are processed in the firms' facilities, with the total volume being distributed throughout the area. Approximately 80 percent of the butter, margarine, eggs, and cheese is purchased for distribution from sources outside the Scranton area, 9 percent is purchased from local wholesalers, and 11 percent is processed by the firms.

SOURCE OF SUPPLIES IN WILKES-BARRE

The volume of food commodities handled and the amounts originating in the Wilkes-Barre metropolitan area, outside the metropolitan area but within the State, and outside the State are given in table 3.

Only 7 percent of the fresh fruit and vegetable volume originated within the State. Transfers among wholesalers in Wilkes-Barre were insignificant. About 25 percent of the direct receipts of fresh fruits and vegetables arrived by rail from producing areas. This percentage was higher than for any other commodity.

About 12 percent of the meat and meat products volume was supplied from sources within Pennsylvania. As in the other food commodities, a few transfers were made among wholesalers. Meat and meat products were received from local slaughterers and meat packers or from the Midwest. About 88 percent came from sources outside the State.

Thirty-eight percent of the products handled by grocery wholesalers originated within the State, but less than 1 percent from the Wilkes-Barre area. A small amount of merchandise was transferred among wholesalers, generally to make up for item shortages. Over 95 percent of the groceries obtained from sources outside the State were received by truck.

About 96 percent of the dairy products and poultry and eggs were supplied from outside the State. No firms handled butter, margarine, or cheese exclusively. These commodities were handled by dairy product and grocery wholesalers along with their other commodities.

Almost all the frozen food tonnage originated outside the State. It is estimated that 87 percent of direct receipts came from sources outside the State. Transfers among wholesalers was approximately 3 percent of the total volume handled.

Table 3 – Source and volume of food products handled by various types of wholesale firms, Wilkes-Barre and Scranton

Type of wholesale firm and location	Source of supply and volume[1]			
	Metropolitan Wilkes-Barre or Scranton	Outside metropolitan area but within State	Outside of State	Total
	Tons	*Tons*	*Tons*	*Tons*
Fresh fruits and vegetables				
Wilkes-Barre	998	2,000	41,456	44,454
Scranton	609	4,715	90,428	95,752
Total	1,607	6,715	131,884	140,206
Meat and meat products				
Wilkes-Barre	149	3,149	23.637	26,935
Scranton	1,659	9,471	19,312	30,442
Total	1,808	12,620	42,949	57,377
Groceries				
Wilkes-Barre	115	5,089	8,323	13,527
Scranton	494	5,161	12,452	18,107
Total	609	10,250	20,775	31,634
Dairy and poultry products				
Wilkes-Barre	35	---	887	922
Scranton	496	449	58,105	59,050
Total	531	449	58,992	59,972
Frozen foods:				
Wilkes-Barre	110	---	6,597	6,707
Scranton	---	---	---	---
Total	110	---	6,597	6,707
All commodities				
Wilkes-Barre	1,407	10,238	80,900	92,545
Scranton	3,258	19,796	180,297	203,351
Total	4,665	30,034	261,197	295,896

[1] Direct receipts

SOURCE OF SUPPLIES IN SCRANTON

The volume of food commodities handled and the amounts originating in the Scranton area, outside the metropolitan area but within the State, and outside the State are shown in table 3.

Less than 1 percent of the fresh fruit and vegetable volume originated from within the State. About 40 percent of direct receipts of fresh fruits and vegetables arrived by rail from producing areas. This percentage was higher than for any other commodity.

About 37 percent of the meat and meat products volume was supplied from sources within Pennsylvania. Transfers among wholesalers in meat amounted to 1,812 tons or less than 1 percent of the total volume handled. About 63 percent of meat and meat products came from sources outside the State.

Thirty-one percent of the products handled by grocery wholesalers originated within the State but less than 3 percent from the Scranton area. A small amount of merchandise, 264 tons, was transferred among wholesalers, generally to make up for item shortages. Over 90 percent of the groceries were received by truck.

About 98 percent of the dairy products and poultry and eggs were supplied from producers outside the State. No firms handled butter, margarine, or cheese exclusively. These commodities were handled by dairy product and grocery wholesalers along with their other commodities.

DISTRIBUTION OF FOOD PRODUCTS IN WILKES-BARRE

Eighty-eight percent of the volume of all commodities was delivered by the wholesalers. This percentage varied from 82 percent for groceries to nearly 100 percent for frozen foods. Specific amounts delivered by wholesalers or picked up by customers are shown in table 4.

Many food wholesalers in Wilkes-Barre distributed largely within a 50-mile radius of the city. Some firms delivered beyond this radius, including parts of New York, New Jersey, and as far north as Canada. Of the total volume of direct receipts, 53 percent, or 49,282 tons, was distributed within the Wilkes-Barre metropolitan area, 31 percent outside this area but within the State, and 16 percent outside the State. Volumes distributed by various wholesale firms within Wilkes-Barre and to other areas are shown in table 5.

Table 4 – Volume of food products delivered by wholesalers and picked up by customers, Wilkes-Barre and Scranton

Type of wholesale firm and location	Delivered by wholesaler	Picked up by customer	Total[1]
	Tons	*Tons*	*Tons*
Fresh fruits and vegetables:			
Wilkes-Barre	37,649	6,805	44,454
Scranton	89,581	6,171	95,752
Total	127,230	12,976	140,206
Meat and meat products			
Wilkes-Barre	25,720	1,215	26,935
Scranton	28,594	1,848	30,442
Total	54,314	3,063	57,377
Groceries:			
Wilkes-Barre	11,029	2,498	13,527
Scranton	10,442	7,665	18,107
Total	21,471	10,163	31,634
Dairy and poultry products:			
Wilkes-Barre	831	91	922
Scranton	55,649	3,401	59,050
Total	56,480	3,492	59,972
Frozen foods:			
Wilkes-Barre	6,584	123	6,707
Scranton	---	---	---
Total	6,584	123	6,707
All commodities			
Wilkes-Barre	81,813	10,732	92,545
Scranton	184,266	19,085	203,351
Total	266,079	29,817	295,896

[1] Direct receipts.

Table 5. Distribution of food products by various wholesale firms, Wilkes-Barre and Scranton

Type of wholesale firm and location	Metropolitan Wilkes-Barre or Scranton		Outside metropolitan area but within State		Outside of State		Total
	Tons	*Percent*	*Tons*	*Percent*	*Tons*	*Percent*	*Tons*
Fresh fruits and vegetables							
Wilkes-Barre	28,006	63	10,224	23	6,224	14	44,454
Scranton	19,778	21	13,185	14	62,789	65	95,752
Total	47,784	34	23,409	17	69,013	49	140,206
Meat and meat products							
Wilkes-Barre	12,121	43	10,235	38	4,579	17	26,935
Scranton	9,948	33	12,153	40	8,341	27	30,442
Total	22,069	38	22,388	39	12,920	23	57,377
Groceries							
Wilkes-Barre	6,764	50	6,087	45	676	5	13,527
Scranton	4,889	27	12,313	68	905	5	18,107
Total	11,653	37	18,400	58	1,581	5	31,634
Dairy and poultry products							
Wilkes-Barre	446	48	476	52	---	0	922
Scranton	9,873	17	8,521	14	40,656	69	59,050
Total	10,319	17	8,997	15	40,656	68	59,972
Frozen foods:							
Wilkes-Barre	1,945	29	1,945	29	2,817	42	6,707
Scranton	---	---	---	---	---	---	---
Total	1,945	29	1,945	29	2,817	42	6,707
All commodities:							
Wilkes-Barre	49,282	53	28,967	31	14,296	16	92,545
Scranton	44,488	22	46,172	23	112,691	55	203,351
Total	93,770	32	75,139	25	126,987	43	295,896

DISTRIBUTION OF FOOD PRODUCTS IN SCRANTON

Over 90 percent of the volume of all commodities was delivered by the wholesalers. This percentage varied by commodity from 58 percent for groceries to 94 percent for fresh fruits and vegetables, meat and meat products, and dairy and poultry products. Specific amounts delivered by wholesalers or picked up by customers are shown in table 4.

Many food wholesalers in Scranton distributed food products outside the State. This included New York, New Jersey, and as far north as Canada. Of the total volume of direct receipts, 55 percent, or 112,691 tons, was distributed out of State, 23 percent or 46,172 tons outside the metropolitan area but within the State, and 22 percent within metropolitan Scranton. Volumes distributed by various wholesale firms within Scranton and to other areas are shown in table 5.

NEED FOR NEW FACILITIES

Many wholesale food firms in Wilkes-Barre and Scranton were housed in old buildings that were not suited for their present use. Although many firms had spent considerable amounts of money to improve their facilities, they were still inadequate. Wholesalers and processors have found that inadequate buildings result in high operating costs.

Some firms were located in old multistory buildings, which were inadequate for modern materials-handling equipment. They had low ceilings and space was poorly arranged. Storage areas were divided into many small rooms. Many of these buildings had inadequate platform space and slow-moving freight elevators.

Some wholesalers had relatively modern facilities and were not interested in relocating, others had inadequate facilities or had no room to expand. Some who did not have direct rail connections had the additional expense of moving their rail receipts from the team tracks to their warehouses.

Some firms were located in downtown areas and their regular business activities at times contributed to furthering traffic congestion. Other firms lacked adequate parking space for both customers and employees. Some had inadequate refrigeration, electrical wiring, sewerage, water, ventilation, and air circulation to meet their needs. Several will be displaced by urban redevelopment programs or have already moved to new or interim facilities. Wholesale food firms now located in redevelopment areas include 25 in Wilkes-Barre and six in Scranton. Twenty-eight of these firms were included in new facility planning.

In all, new facilities are needed by 18 meat and meat products firms, 17 fresh fruit and vegetable wholesalers, nine grocery firms, four fluid milk products plants, three dairy and poultry products firms, and one refrigerated storage firm (table 6). In addition, one national food chain may be interested in wholesale facilities in a distribution center. Thus, 52 firms are included in the initial plan for a wholesale distribution center and space is provided for potential food-chain development and a frozen food processor.

PROPOSED FACILITIES AND ACREAGE REQUIRED FOR A WHOLESALE FOOD DISTRIBUTION CENTER

The facilities and amount of floorspace recommended for a wholesale food distribution center are based on the kind and volume of food handled by independent wholesalers who could benefit by moving to new facilities or who might be required to relocate because of renewal projects or proposed highway development programs.

To meet the needs of operators who are expected to locate in the new facilities, single- and multiple-occupancy buildings are proposed. In general, large-volume wholesalers and firms with specialized operations requiring a large amount of floorspace would be located in the single-occupancy buildings. Wholesalers with small volumes and operations requiring small amounts of floorspace would be housed in the multiple-occupancy buildings. A multiple-occupancy building consists of individual units with a single-story warehousing area and a second floor or mezzanine for offices (fig. 17).

Regardless of the type of facilities, functional buildings should be constructed to keep costs at the lowest level consistent with local building codes and users' specifications. Often the total costs can be kept down by contracting for construction at a time that is convenient to the builder.

The proposed facilities will have five multiple-occupancy buildings and 13 single-occupancy buildings containing 509,800 square feet of first floor space (table 6). Total floorspace in proposed facilities is usually less than that in old facilities because of better interior arrangements. In addition, the high ceilings in the new facilities permit higher stacking of products than is possible in most existing facilities. However, because of expanded operations planned by some firms in Wilkes-Barre and Scranton, proposed space is greater than present space now occupied by these firms.

In the following sections the facilities proposed for each type of wholesale firm are described. Particular details are given for the facilities of firms with moderate volume that would be housed in multiple-occupancy buildings. Interior arrangements can be designed to the requirements of each firm. Layouts presented here should be considered as guides.

The number of wholesalers to utilize the food distribution center should be determined by the number who sign commitments to lease space or to construct buildings in the center. Therefore the number of facilities actually constructed may vary from the number contained in this report.

For all dealers to leave the facilities they now occupy and move into a new market would be unrealistic. Some of them have modern or efficient facilities that are well located. However, 52 food wholesalers in the Wilkes-Barre, Scranton area could benefit from having new facilities. These firms handled 131,124 tons of products, excluding fluid milk products and refrigerated

Table 6 –Number of firms expected to relocate, volume handled, present space, and building and space recommended for an improved wholesale food center, Wilkes-Barre and Scranton

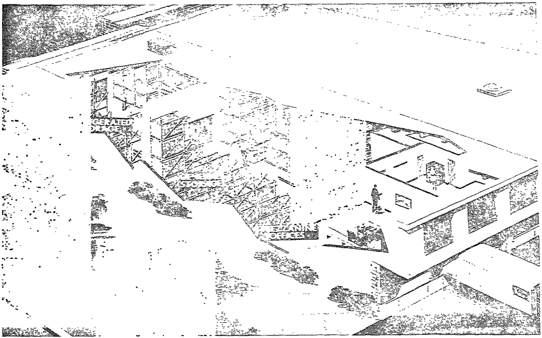
Type of wholesale firm	Firms	Annual volume of direct receipts	Proposed facilities: Multiple occupancy		Proposed facilities: Single occupancy	Present floor space	Proposed floor space[1]
	Number	*Tons*	*Buildings*	*Units*	*Buildings*	*Sq ft*	*Sq ft.*
Fresh fruits and vegetables							
Wilkes-Barre	8	19,670	2	16	0	48,241	48,000
Scranton	9	60,635		22	1	99,400	106,000
Total	17	80,305	2	38	1	147,641	154,000
Meat and meat products							
Wilkes-Barre	8	13,270	1	6	3	84,451	100,000
Scranton	10	21,717		6	3	80,108	103,300
Total	18	34,987	1	12	6	164,559	203,300
Groceries:							
Wilkes-Barre	6	11,473	1	6	1	70,144	37,200
Scranton	3	3,541		7	0	55,000	21,000
Total	9	15,014	1	13	1	125,144	58,200
Dairy and poultry products							
Wilkes-Barre	3	818	1	3	0	7,000	9,000
Scranton	0	0		0	0	0	0
Total[1]	3	818	1	3	0	7,000	[2] 9,000
Refrigerated storage							
Wilkes-Barre	0	0	0	0	0	0	0
Scranton	1	(3)		0	1	(3)	62,500
Total	1	(3)	0	0	1	(3)	62,500
Fluid milk products:							
Wilkes-Barre	4	(4)	0	0	4	(3)	22,800
Scranton	0	0		0	0	0	0
Total	4	(4)	0	0	4	(4)	22,800
All commodities.							
Wilkes-Barre	29	45,231	5	31	8	209,836	217,000
Scranton	23	85,893		35	5	234,508	292,800
Total	52	131,124	5	66	13	444,344	509,800

[1] 1st floor space only.

[2] Includes provision of space in master plan for expanded processing operations by candidate firm.

[3] Data not given to prevent disclosure of individual firm data.

[4] See pp. 11 and 20 for details concerning the volume data for fluid milk products.



PN-3040

Figure 17 –Multiple-occupancy building for a food distribution center based on an artist's concept.

storage volume. The facilities needed for these firms could be met with the following:

(1) Five multiple-occupancy buildings: two for fresh fruits and vegetables, one for meat and meat products, one for dairy, poultry, and frozen foods, and one for grocery firms, containing a total of 198,000 square feet of floorspace.

(2) Thirteen single-occupancy buildings containing 311,800 square feet of first floor space.

(3) Direct rail access to all buildings.

(4) Paved areas at least 300 feet wide where buildings face each other.

(5) Parking space for approximately 1,000 vehicles in addition to the loading and unloading space at the building platforms.

(6) Space for expansion of present facilities and for construction of food-chain facilities or for allied industries.

Many small firms do not need individual facilities. These firms can be housed together in multiple-occupancy buildings, which consist of rows of individual units called standard store units.

There are three basic designs for the multiple-occupancy building (fig. 18). One has both front and rear platforms enclosed. The second has an enclosed front platform but an open rear platform. The third has both front and rear platforms open. The units will be 30 feet wide and 100 feet deep. Floor-to-ceiling and wall-to-wall partitions will separate the space of the different firms. These partitions are removable to permit future adjustment of space among firms. The ceilings will be at least 21 feet high to permit high stacking. A 20-foot-deep mezzanine over the front platform or shipping area will provide room for offices and restrooms. Units for meat wholesalers will have a second floor instead of a mezzanine. This second floor is planned for offices and storage rooms. The first floor of these units will have 12-foot ceilings. Access to the mezzanine and second floor will be by stairs in the interior of each unit.

Since insulation for the floor of the refrigerated areas should be installed during initial construction, it is necessary to determine in advance the location of coolers and freezers. Refrigeration equipment could be located on the roof and utility lines along walls inside the building.

Interiors of all units should be well lighted. For general office work, 15 to 20 foot-candles (unit of measure for illumination) is generally satisfactory. About 10 to 15 foot-candles should be used in storage areas, with supplementary lighting for display and loading areas.[7]

Heat could be provided by blower-type unit heaters. Control panels for utilities should be conveniently located. For Guides to Planning Interior Operational Layouts, see Appendix I.

Fresh Fruits and Vegetables

Two multiple-occupancy buildings and one single-occupancy building would be required to meet the needs of 17 fresh fruit and vegetable dealers who need new facilities (table 6). The multiple-occupancy buildings should have a total of 38 standard store units.

Figure 19 shows the layout of a fruit and vegetable unit in a multiple-occupancy building. Each unit would be 30 feet wide and 100 feet deep, including open front and rear platforms, each 14 feet deep. The height of the ceiling in the interior of each unit should be at least 21 feet. A mezzanine, 30 feet wide by 20 feet deep, extends over the front platform for offices and restrooms. Each unit contains 2,160 square feet of enclosed first floor operating space, 840 square feet of platform space, and 600 square feet of mezzanine space, totaling 3,600 square feet of floorspace per unit.

The platforms are covered and extend the width of the multiple-occupancy buildings. The front platform should be at truck-bed height, 45 inches from the street, with pedestrian access conveniently located. The mezzanine office, 16 feet above grade, extends 6 feet beyond the edge of the platform and provides protection from the weather for loading and unloading operations. The rear platform should be 55 inches above the rails, at the floor level of refrigerator cars, and should have a roof flush with the edge of the platform

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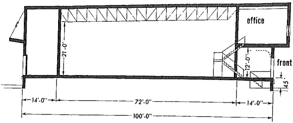
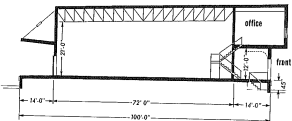
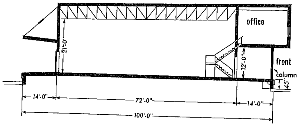
[7] All lighting estimates are based on information from the "IES Lighting Handbook, the Standard Lighting Guide," by the Illuminating Engineering Society, ed. 4, edited by John E. Kaufman, v. 1, New York, 1966. These estimates should be considered only as guides to specific lighting requirements of individual firms.



unit with **BOTH PLATFORMS ENCLOSED**



unit with **PLATFORMS OPEN AND ENCLOSED**



unit with **BOTH PLATFORMS OPEN**

Figure 18.–Three basic designs for a multiple-occupancy building

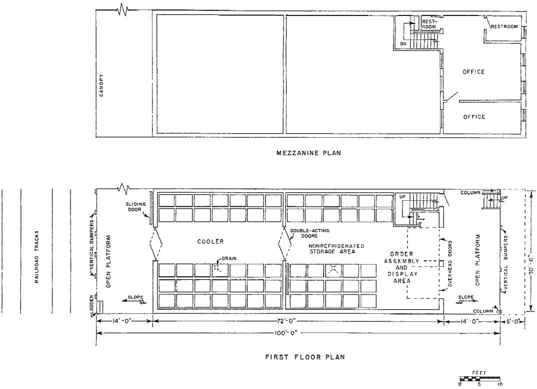


Figure 19.—Layout for a fresh fruit and vegetable firm.

and 17 feet above the street The roof should be supported in such a way as to provide a clear operating area beneath

The rails should be recessed and flush with the top of the pavement to permit trucks easy access to the rear platform Both front and rear platforms should be equipped with vertical rubber bumper strips along the front to prevent damage by trucks

An 8- by 8-foot doorway should be provided at the front and the rear of each unit for receiving and shipping products. A pedestrian door should be at the front.

The interior layout of the units should be designed to meet the requirements of the individual dealers Some general recommendations applicable to fruit and vegetable dealers follow.

Pallet racks designed for stacking three tiers high should be used for storage. A minimum of 2½ feet should remain clear at the ceiling to permit air circulation Ventilation is necessary in storage areas to avoid overheating in warm weather and condensation during cool weather.

All floors and platforms on the first floor should have a nonskid surface and be sloped to cause water runoff. A slope of at least one-eighth inch per foot is considered adequate. Interior first floors should be equipped with floor drains.

The first floor should support a live load of about 400 pounds per square foot. This capacity should be adequate for loads resulting from stacking products three high on pallet racks Mezzanine floors should be constructed to support a live load of about 100 pounds per square foot and could include some light storage. The earth between the reinforced concrete floor slabs should be firmly compacted with a vapor barrier between the earth and the concrete slab.

One fresh fruit and vegetable firm would require a single-occupancy building because of the volume and the nature of its operations. This building should contain 40,000 square feet of floorspace. Although it should be designed for the firm that will occupy it, it should also conform to the master plan developed for the food center.

The total floorspace needed by the produce dealers, including mezzanine space, is 176,800 square feet.

Meat and Meat Products

One multiple-occupancy building containing 12 units and six single-occupancy buildings would meet the needs of 18 meat firms considered as possible tenants in a new food center

These multiple-occupancy buildings will have two floors. The second floor is provided for offices, a welfare area, restrooms, and storage rooms. The first floor of each unit is 30 by 100 feet, including enclosed front and rear receiving and shipping areas. Each unit will contain 3,000 square feet of first floor space and 3,180 square feet of second floor space, totaling 6,180 square feet per unit. Ceilings should be 12 feet high on the first floor and 8 feet high on the second floor. Figure 20 shows a possible layout of a meat and meat products unit

The enclosed front shipping area should be 45 inches above the street for truck loading and unloading The rear receiving area should be 55 inches above the top of the rails at refrigerator-car floor level. The rails should be recessed and flush with the top of the pavement to permit easy access by trucks to the rear receiving area. The offices over the front shipping area extend 6 feet beyond the edge of the dock and 16 feet above grade to provide protection from the weather during loading and unloading. Vertical rubber bumpers should be attached along the front edge of the dock to prevent damage by trucks

A future shift from shipments of carcass meat to boxed meat could eliminate the need for conventional meat rails in these facilities Meat rails should be supported from the first floor on steel columns—not suspended on rods attached to the second floor. The second floor could be used for light storage of such things as packaging materials used in packing processed meat and primal cuts from carcass meat. The second floor should be constructed so that all or part of it can be removed without damaging the basic building. This facility design satisfies the present needs for handling meat in carcass form.

Usually the storage and work areas where meat is handled are refrigerated. Therefore cooler doors, about 5 feet wide and 7 feet high with inner double-acting doors, should be installed at the front and rear of each unit Insulation in the

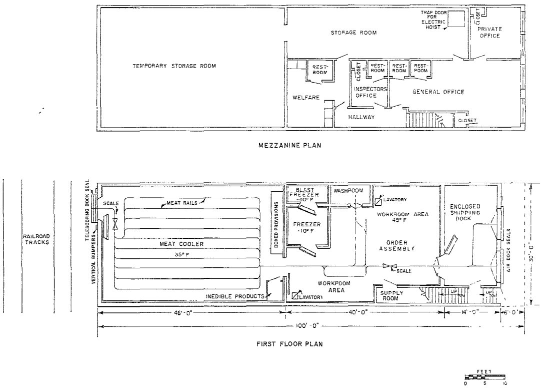


Figure 20.—Layout for a meat and meat products firm.

floor should be installed during initial construction.

Interior surfaces should be finished in accordance with the facility requirements of local, State, and Federal meat inspection regulations. The following are examples of some of these requirements. Floor areas where products are handled should be constructed of high-density, acid-resistant, waterproof concrete or good-quality vitrified brick. Brick should be bonded with acid-resistant, waterproofing mortar and laid on a waterproof concrete base. Floors must be sloped to provide adequate drainage with at least one drainage outlet for each 400 square feet of floorspace.

Total space in the 12 units of the multiple-occupancy buildings is 74,160 square feet, which consists of 36,000 square feet of enclosed first floor space and 38,160 square feet of second floor space. The second floor includes a 6-foot overhang over the front loading and unloading area.

Six meat and meat products firms would require single-occupancy buildings. These buildings would contain 54,000, 40,000, 25,500, 16,900, 16,500, and 14,400 square feet of floorspace, respectively. They should also conform to the master plan developed for the food center. The first floor space in the multiple- and single-occupancy buildings totals 203,300 square feet.

Groceries

One multiple- and one single-occupancy building are needed to provide space for nine grocery dealers who should relocate. The multiple-occupancy building should contain 13 standard store units.

Each unit in the multiple-occupancy building is 30 feet wide and 100 feet deep, including a 14-foot-deep rear platform. An enclosed front platform is provided. Each unit contains 2,580 square feet of enclosed first floor space, 420 square feet of rear platform space, and 600 feet of mezzanine space for a total of 3,600 square feet per unit. Ceilings should be at least 21 feet high. The floor should be at truck-bed height, 45 inches above street level. A mezzanine, 30 feet wide by 20 feet deep, over the front of the store unit is for offices and restrooms. Most firms will require two or more units. The layout in figure 21 shows the typical double unit.

Trucks will be loaded and unloaded at the front or rear of the unit through 8- by 8-foot doorways. The offices on the mezzanine extend 6 feet beyond the front loading area and 16 feet above grade to provide protection during inclement weather. A pedestrian door at street level will open to stairs leading to the first floor of the unit and to the mezzanine.

The open rear platform will extend the width of the building and should be at boxcar floor level, 45 inches above the rails. The rails should be recessed and flush with the pavement to permit trucks access to the platform. The roof over the rear platform should be 16 feet above the rails. This roof should be supported in such a way as to provide clear operating space on the platform. Two doorways are at the rear of the unit. Each doorway has an 8- by 8-foot sliding door with two 4- by 8-foot double-acting inner doors. Vertical rubber bumper strips should be attached below the door openings of the enclosed front platform and along the edge of the rear platform to prevent damage from trucks.

Although specific layouts of each unit depend on the needs of individual dealers, it is suggested that grocery dealers use pallet racks for storage. The first floor, therefore, should be designed to support a live load of about 400 pounds per square foot. The mezzanine floor should be constructed to support a live load of about 100 pounds per square foot. The earth between the reinforced concrete floor slabs should be firmly compacted, with a vapor barrier between the earth and the concrete slab.

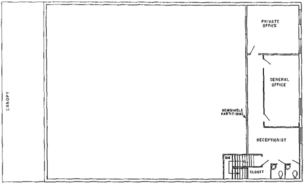
Some grocery firms handle products that require refrigeration. If refrigerated rooms are anticipated, floors should be insulated during initial construction.

Grocery wholesalers occupying space in the multiple-occupancy building have a total of 46,800 square feet of floorspace, consisting of 33,540 square feet of first floor area, 7,800 square feet of mezzanine space, and 5,460 feet of rear platform space.

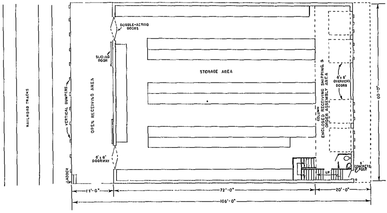
One single-occupancy building would house one of the larger independent grocery firms. This building will contain 19,200 square feet of floorspace. The specific layout for the building should be in accordance with the occupant's needs.

Dairy, Poultry Products, and Frozen Foods

Three dairy, poultry products, and frozen food firms need new facilities. The space needs for the dairy and poultry products could be satisfied with



MEZZANINE PLAN



FIRST FLOOR PLAN

Figure 21.--Layout for a double-unit grocery firm.

one multiple-occupancy building, which has three standard store units. Each unit is 30 feet wide and 100 feet deep with a ceiling height of at least 21 feet. This space includes an enclosed front and an open rear platform, each 14 feet deep. A mezzanine, 30 feet wide by 20 feet deep, extends over the front platform for offices and restrooms. Each unit contains 2,580 square feet of enclosed first floor space, 420 square feet of open platform space, and 600 square feet of mezzanine space, totaling 3,600 square feet per unit. An interior layout for a dairy products firm is shown in figure 22.

The front platform should be 45 inches from the ground, at truck-bed height, and with access for pedestrians conveniently located. The rear platform should be 55 inches from the top of the rails and at refrigerator-car floor level. The rails should be recessed and flush with the top of the pavement to permit trucks easy access to the rear platform. The mezzanine offices, 16 feet above the street, extend 6 feet beyond the edge of the front platform and provide protection during inclement weather. The roof over the rear platform should be 15½ feet above the street, flush with the platform edge, and supported in such a way as to provide clear operating space beneath. Vertical rubber bumpers should be installed along the edge of both platforms to protect them from damage by trucks.

Two 8- by 8-foot overhead doors and a door for pedestrians are at the front of the unit and an 8- by 8-foot sliding door at the rear of the unit.

All floors and platforms should have a nonskid surface. The inside first floor area should slope at least one-eighth inch per foot to drains. The first floor should be constructed to support a live load of about 400 pounds per square foot and to provide for use of pallet racks for storage. The mezzanine floor should support a live load of about 100 pounds per square foot. The earth between the reinforced concrete floor slabs should be firmly compacted with a vapor barrier be ween the earth and the concrete slab.

The dairy and poultry products firms have been provided space in a multiple-occupancy building and will require 10,800 square feet including mezzanine space.

One frozen food processing firm requires new facilities. Space for a 150,000-square foot single-occupancy building to meet the firm's needs is provided in the master plan. Although the building should be designed for the firm, it should also conform to the master plan developed for the food center.

Refrigerated Storage

A large refrigerated storage firm serving the area has been included in the new facility planning. A single-occupancy, one-story refrigerated warehouse containing 62,500 square feet of space is planned. The interior layout of this facility, as well as the amount of freezer and cooler space, would be determined by the tenant.

Fluid Milk Products

Four fluid milk products processing firms are considered for new facilities in the proposed market. Space is provided for four single-occupancy buildings containing a total of 22,800 square feet of floorspace. The facilities are one-story structures. The shape of each is dependent on the needs of the individual firms. The buildings, which have a flat roof design, are planned so that they can be easily expanded to meet future needs.

Figure 23 shows a typical layout for a fluid milk products processing plant with a capacity of approximately 3,000 gallons a day. It is designed for processing a full line of fluid milk products, packaged in both paper and glass containers. The layout provides a good flow for products and supplies, with the individual plant areas arranged in an operational sequence in order to minimize costs. The location and arrangement of the major equipment are shown, but such items as water and electrical outlets and hand-washing facilities are excluded. The layout is not intended for any specific firm, but it could be used as a guide in developing a layout for a particular operation.

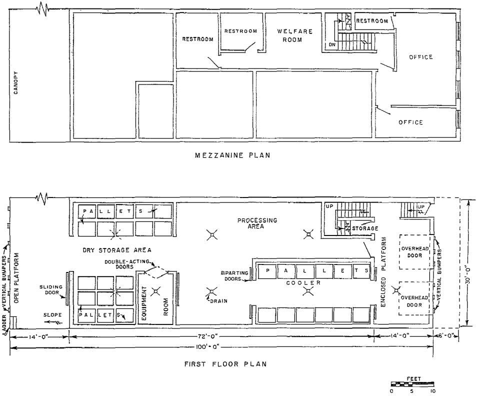


Figure 22.–Layout for a dairy firm.

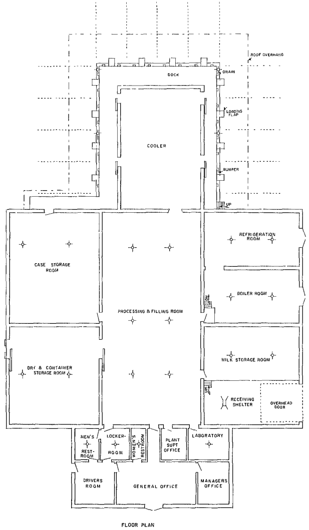


Figure 23.—Layout for a fluid milk products plant.

FLOOR SPACE IN PROPOSED FOOD DISTRIBUTION CENTER

The proposed food distribution center will have 509,800 square feet of first floor space for the food groups and the refrigerated storage and fluid milk products facilities. It will include 13 single-occupancy buildings with 311,800 square feet of first floor space and five multiple-occupancy buildings with 198,000 square feet of first floor space (figs. 24 and 25).

Streets and Parking Areas

All streets in the food center should be paved to carry heavy traffic. Drainage should be away from the buildings to drains in the streets. Paving could be of a blacktop combination that would consist of a foundation of 7 inches of gravel or crushed rock, 4 inches of macadam base, and 2 inches of asphaltic concrete surface. Concrete paving 6 inches thick is suggested for areas where oil or gasoline drippings would be excessive because of their softening or dissolving effect on asphalt.

The 300-foot width recommended between most facing buildings provides space for large trucks to maneuver and park perpendicular to the platforms on both sides of the buildings. Cross streets 80 feet wide should be provided to facilitate efficient traffic flow and to permit direct access to the various sections of the market.

Farmers Market

A section of the parking area may be reserved for use as a farmers market should such a need exist when the food center is developed. No separate cost allocation is made because the area will be used for parking if not designated as a farmers market.

Expansion Areas

Sufficient land should be acquired at the outset for expansion and growth of the food center. If additional land cannot be acquired at the time of the purchase, it should be committed by agreement to market use if possible. Only in this way would the center be assured that the kinds of businesses in adjacent areas would be compatible with the overall market development.

Central Energy Plant

The use of a central energy plant to provide refrigeration and heat should be considered. A utility company, public refrigerated storage firm, or others who may be interested could provide refrigeration and heat with a central energy plant to individual wholesalers or processors in the distribution center. The users would be billed on a metered basis. Findings from one study showed that a central refrigeration plant will have lower ownership and operating costs than individual units.[8] Probably heating would also be less costly with a central plant.

Some of the advantages of central energy plants are (1) elimination of capital investment in heating and refrigeration equipment, (2) elimination of the need to maintain and repair the equipment, and (3) lower costs.

Solid Waste Disposal

Pending antipollution legislation in some areas of the country is limiting the choice of solid waste management systems that can be used and forcing some areas to upgrade present waste management methods in use.

Many types of waste management systems are available. Factors to be considered when selecting a method for managing solid wastes include economic feasibility, system implementation considering the physical characteristics of a particular center, acceptability to the tenants, and present or pending antipollution regulations.

An in-depth engineering study entailing the evaluation of solid waste sources and types, waste generation rates, and present methods of waste handling and disposal at food distribution centers was conducted under contract for the U.S. Department of Agriculture. Excerpts from the recommendations of this study are presented in Appendix II.

Acreage Required

Although the acreage required for the proposed facilities could vary depending on the shape of the site, approximately 125 acres should be obtained to develop an adequate food distribution center for Wilkes-Barre and Scranton. A site of this size would be needed for the initial center, including building area, streets, parking area, and expansion area. Additional space should be available for allied industries

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[8] For a more detailed discussion, see Stahlman, Robert L., "A Study of Refrigeration Systems for Urban Food Distribution Centers." U.S. Dept. Agr. Mktg. Res. Rpt. 921, 107 pp., illus., 1972.

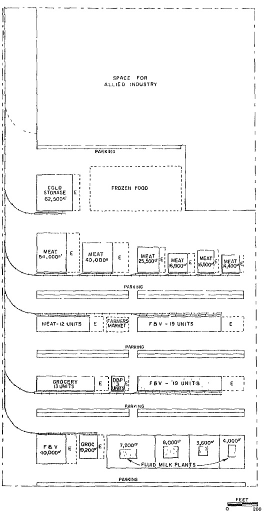

Figure 24.—Layout for the proposed food distribution center.

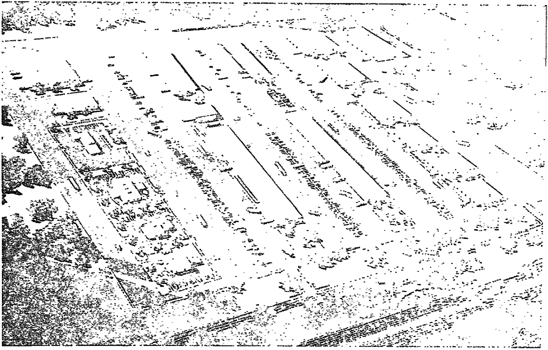

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Figure 25.–Master plan for the proposed food distribution center based on an artist's concept.

and other food wholesalers that would want to construct facilities close to the market. In the master plan 39 acres of land have been included for this type of development. Failure to acquire adequate land would restrict future growth of the center in providing the facilities needed to supply food to the larger Wilkes-Barre and Scranton population of the future.

SELECTING A SITE FOR A WHOLESALE FOOD DISTRIBUTION CENTER

Potential sites were suggested by the wholesale food firms, chambers of commerce, the Economic Development Council of Northeastern Pennsylvania, real estate firms, and others interested in improving wholesale distribution efficiency in the area.

The location of the sites that are considered representative of those available is given in figure 26 and their description in table 7. The following sites are not all inclusive; others are available. All are acceptable and no order of preference is intended.

Crestwood Industrial Park

The Crestwood Industrial Park (fig. 27) is located in Wright Township, Luzerne County, along U.S. Highway 309, approximately 6 miles south of Wilkes-Barre and about 14 miles from Scranton. The area is served by U.S. 309, adjacent to the park, Interstate 81, 2 miles north; Pennsylvania Turnpike, northeast extension, 6 miles east; and Interstate 80, within 10 miles south of the park. Main line rail service is adjacent to the eastern boundary. The extension of individual sidings is feasible. Classification yards, where cars are selected for delivery to different destinations, are located in Wilkes-Barre. All utilities except sewerage are available to the site. Present industries are using private disposal systems. Over 100 acres are available at an estimated $1,500 per acre in the industrial park itself. Land adjacent to the site is also available.

Greater Wilkes-Barre Industrial Fund Site

The Greater Wilkes-Barre Industrial Fund site (fig. 28) is located off U.S. Highway 309 near the new Wyoming Valley Mall. It is about 1 mile from downtown Wilkes-Barre and 18 miles from downtown Scranton. Over 300 acres of undeveloped land are available. The site is former strip mine property, which is scheduled to be leveled and prepared for use as industrial property by the State. Interstate 81, Pennsylvania Highway 115, and U.S. 309 are near the site. Access to the site is by way of private road from U.S. 309. No utilities are presently on the site, but the State plans to make them available. The estimated per-acre cost of this site is $3,000.

Flick Estate and Adjacent Property

The Flick estate and adjacent property (fig. 29) are located off Pennsylvania Highway 115 adjacent to the Interstate Industrial Park. The site is about 2 miles from downtown Wilkes-Barre and 17 miles from downtown Scranton. The land is generally flat with one large slag bank on the property, which is scheduled to be leveled. Laurel Run Creek bisects a part of the property. Interstate 81 and Pennsylvania 115 and 315 are near the site. Access to the site is by way of Scott Street and Pennsylvania 115. Rail service, available on adjacent property, could be extended to the site. Utilities are available. Over 100 acres are available on the site at an estimated $10,000 per acre. Land adjacent to the site may also be obtained.

Interstate Industrial Park

The Interstate Industrial Park (fig. 30) is located off Pennsylvania Highway 115 adjacent to the Flick estate property. It is about 2 miles from downtown Wilkes-Barre and 17 miles from downtown Scranton. The site is generally flat. Interstate 81 and Pennsylvania 115 and 315 are near it. Access to the site is by private road from Pennsylvania 315. Rail service is on the site. Utilities are available. Over 100 acres are available on the site at an estimated $7,000 per acre. Land adjacent to the site may also be obtained.

Bear Creek Site

The Bear Creek site (fig. 31) is in Bear Creek Township, Luzerne County, adjacent to Pennsylvania Highway 115 and the Pennsylvania Turnpike, northeast extension, and approximately 6 miles from Wilkes-Barre and 12 miles from Scranton. Highway access to Pennsylvania 115 and the Pennsylvania Turnpike, northeast extension, is adjacent to the property. Interstate 81 is approximately 1 mile north of the site. There is presently no rail service to the property. Utilities are available except gas and

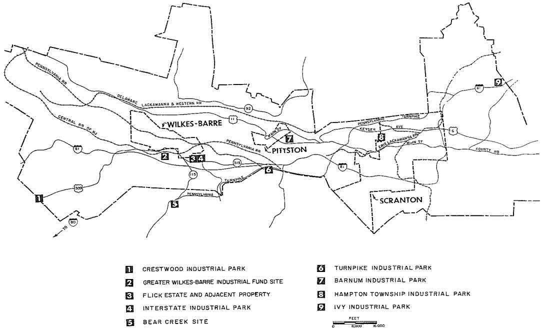

Figure 26.–Location of possible sites for a wholesale food distribution center, Wilkes-Barre and Scranton.

Table 7 –Description of representative sites for wholesale food distribution center, Wilkes-Barre and Scranton

Site	Approximate size	Present land use	Access to rail transportation	Access to highways	Distance to downtown–		Topography and soil condition	Utilities available	Cost per acre
					Wilkes-Barre	Scranton			
	Acres				*Miles*	*Miles*			
Crestwood Industrial Park	[1]100	Undeveloped	Rail access on site	U.S 309, adjacent to site: Interstate 81, 2 miles north; extension of Pa Turnpike, 6 miles east, Interstate 80, 10 miles south.	6	14	Slight rolling to level	All except sewerage private disposal system.	$1,500
Greater Wilkes-Barre Industrial Fund site	300	do	Rail adjacent to site	Interstate 81, Pa. 115, and U.S 309 near site; access via private road from U.S. 309	1	18	Strip mine area	None will be available	3,000
Flick estate and adjacent property	[1]113	do	do	Interstate 81 and Pa. 115 and 315 near site; access via Scott St. and Pa. 115	2	17	Generally flat, 1 large slag bank, off grade with adjacent roads, Laurel Run Creek on site	All	10,000
Interstate Industrial Park	[1]100	do	do	Interstate 81 and Pa. 115 and 315 near site; access via private road from Pa. 315	2	17	Generally flat, on grade with adjacent roads.	do	7,000
Bear Creek site	1,841	do	No rail	Pa 115 and Pa. Turnpike northeast extension adjacent to site; Interstate 81 approx 1 mile north.	6	12	Wooded, level, on grade with adjacent roads.	Electricity and water, no gas or sewerage	7,000

Turnpike Industrial Park	214	do	Rail access on site	Pa. Turnpike northeast extension provides east and west access, intercrossing of Interstate 80 and 81 approx. 23 miles to south	9	9	Level to rolling, partly brush covered, sand and gravel subsoil	All except sewerage	7,000
Barnum Industrial Park	318	do	Rail could be extended to site.	Interstate 81 and Pa. 315 within 2 miles; extension of Pa. Turnpike within 2½ miles, access via McAlpine St. and Foote Ave.	9	9	Slightly rolling to level, on grade with adjacent roads, sand, gravel, and rock fragments	All	7 000
Hampton Township Industrial Park	380	do	Rail on site	Interstate 81 approx. 3 miles from site; North Scranton Expressway approx. 2½ miles from site via Keyser Ave	18	2	Land requires filling, on grade with adjacent roads	Electricity gas and water, no sewerage	7 000
Ivy Industrial Park	200	Generally undeveloped; some farm buildings on site.	No rail	Interstate 81 and intersection of Pa 632 (Carbondale Rd.) adjacent to site	27	8	Level and improved, on grade with adjacent roads and surrounding terrain	Electricity, gas well water, and private sewerage facilities	7 000

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[1] Adjacent land available

[2] Railroad approximately 5 miles south at Clarks Summit

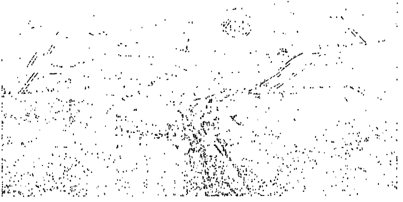

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Figure 27.–Crestwood Industrial Park

sewerage. Over 1,800 acres are available at an estimated $7,000 per acre.

Turnpike Industrial Park

The Turnpike Industrial Park site (fig. 32) is in Pittston Township about 9 miles from both Wilkes-Barre and Scranton. Interstate Highways 80 and 81 intercross approximately 23 miles south of the property. Rail tracks are on the southeastern part of the site. Utilities are available except sewerage. Over 200 acres are available at an estimated $7,000 per acre.

Barnum Industrial Park

The Barnum Industrial Park (fig. 33) is in the Borough of Duryea, Luzerne County, adjacent to Foote Avenue and Phoenix Street. It is about 9 miles from both Wilkes-Barre and Scranton. The site has slightly rolling to level land. It is within 2 miles of Interstate Highway 81 and 2½ miles of the Pennsylvania Turnpike. Two railroads could be extended to the site. Utilities are available. Over 300 acres are available at an estimated $7,000 per acre.

Hampton Township Industrial Park

The Hampton Township Industrial Park (fig. 34) is in Lackawanna County. Approximately one-third of the property is in Scranton and two-thirds in the Borough of Taylor. The site is about 2 miles from downtown Scranton and 18 miles from downtown Wilkes-Barre. It is bounded on the north by Keyser Avenue and Luzerne Street, on the south by Oak Street, on the east by Parrot Avenue, and on the west by Keyser Avenue. The site is not level. Some sections are as much as 100 feet higher than other parts. The main entrance is on Keyser Avenue and is less than 2 miles from the recommended interchange with the Pennsylvania Turnpike. Interstate Highway 81 is approximately 3 miles northeast of the site and the North Scranton Expressway is about 2½ miles east. A railroad line bisects the western part of the property. Electricity, gas, and water are available but not sewerage About 380 acres are available at an estimated $7,000 per acre

Ivy Industrial Park

The Ivy Industrial Park (fig 35) is in South Abington Township, Lackawanna County, adjacent to Interstate Highway 81 at the Waverly Interchange with Pennsylvania Highway 632. It is approximately 8 miles from downtown Scranton and 27 miles from downtown Wilkes-Barre The property is level, improved farmland. Electricity, gas, and well water are available. Septic tank sewerage facilities are used at this time Sewerage treatment facilities for South Abington Township are being planned. About 200 acres are available at an estimated $7,000 per acre.

PN-3032

Figure 28.—Greater Wilkes-Barre Industrial Fund site.

PN-3033

Figure 29 –Flick estate and adjacent property

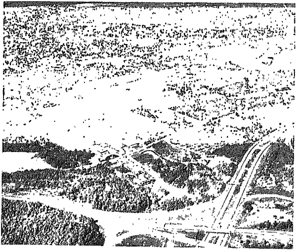
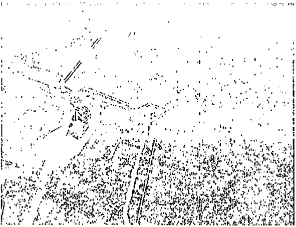


Figure 30 –Interstate Industrial Park

PN-3034



PN-3035

Figure 31.–Bear Creek site

PN-3036

Figure 32.–Turnpike Industrial Park.

PN-3037

Figure 33.–Barnum Industrial Park.

PN-3038

Figure 34.–Hampton Township Industrial Park.

PN-3039

Figure 35.—Ivy Industrial Park.

OPERATING AND FINANCING A FOOD DISTRIBUTION CENTER

Management

Competent management is imperative in directing the orderly development and operation of a wholesale food distribution center. The finest in overall market design and construction will not insure the success of a new food distribution center, unless it is properly promoted and soundly managed.

Everyone in the area has a right to be concerned with the development and operation of the market. Investors want a reasonable return on their investment. Producers want a market that can provide a fair price for their products, handle them efficiently, and maintain their quality. Wholesalers want to be able to handle food products at the lowest possible cost so that they can be competitive and still receive a fair return for their efforts. Consumers want an ample supply of a variety of foods that are fairly priced. The city wants a modern food distribution system that can guarantee effective food handling, permanent jobs, and upgrading of the general area.

Regardless of who may construct and finance the center, there should be definite assurances that—

(1) The center will be properly located, designed, and equipped.

(2) Overbuilding will be prevented to assure maximum occupancy.

(3) Funds will be invested wisely to provide for real needs so that increased efficiency will not be offset by high rents or ownership costs.

(4) Facilities of the center will be used in the best interests of the industry and the public.

(5) The center will be operated without discrimination against any buyer, seller, mode of transportation, or origin of shipment.

Methods of Financing

Two or more sources of capital could be used to finance a new wholesale distribution center in the Wilkes-Barre, Scranton area. The entire project could be constructed and operated by a single group or agency, or various parts could be constructed and operated by different groups or agencies.

In 1967 the State Legislature of Pennsylvania enacted the Industrial Development Authorities Act to encourage industrial and commercial development. This Act empowers any county, city, town, borough, or township to create an Industrial Development Authority. Such an Authority can issue nondebt revenue bonds to finance the acquisition or construction of industrial development projects. This Act permits the financing of both plant and equipment. As long as the property is held by the Authority, no real estate taxes are paid, but a payment in lieu of taxes is required. Bonds may be issued with maturity periods up to 50 years from the date of issue.

A wholesale food distribution center falls within the meaning of the Act. An "Industrial Development

Project" includes plant and equipment; the term "industrial" includes warehouses and terminals. See Appendix III for more details concerning the Industrial Development Authorities Act.

Some of the more common methods of financing food distribution centers are through private corporations, public benefit corporations, direct public ownership, or a combination of these methods. The following descriptions of these methods are adapted in part from a report on types of ownership and methods of financing.[9]

Private Corporation

A private corporation, organized to own and operate a wholesale food center, is a legal entity. It is organized in conformity with State statutes and made up of individuals bound together for a common purpose or objective. Usually a private corporation is operated on a profit basis, but it may also be a nonprofit operation.

When a private corporation is operated for profit, there are usually no restrictions on the sale of voting stock to any individual because of his occupation or profession nor on the number of shares of voting stock that may be held by any one individual. Stockholders have one vote in corporate affairs for each share of voting stock held. Some wholesale food markets are owned and operated by private corporations. The principal stockholders in some of these corporations are the tenants. In others, the corporation is a rail company or other firm that was primarily organized for another type of business. Most of the large terminal produce markets built in the 1920's were sponsored by rail companies.

To form a private corporation, the incorporators usually obtain a charter from the State. This charter defines the powers of the corporation and of its officers and directors. It specifies the stockholders' rights and how control shall be exercised.

Among the characteristics of a private corporation is the power of the board of directors to make decisions quickly and without the delay found in some other types of organization. Often this executive authority is exercised through the immediate management. Quick decisions on major policy matters may be the difference between success and failure of the organization. In addition, when the period of amortization expires, the entire investment belongs to the stockholders, tenancy changes have no effect upon stock ownership, and transfer of stock is unrestricted.

Wholesale food markets owned by private corporations tend to become so-called "closed" markets. Some have prohibited the delivery of food items brought in by truck, especially out-of-State trucks. Often private corporations do not provide adequate space for expansion, either for increased volume or for new food handlers and allied industries. The major problem of corporate ownership is that substantial financial equity is required. Sometimes sponsors of private corporation markets have more difficulty in obtaining funds for the preliminary organization and equity than sponsors of public markets.

A nonprofit private corporation is not a government agency but must be organized in conformity with existing State statutes. In a nonprofit corporation, participation in corporate rights and activities is usually based either on a system of dues, which limits each member (stockholder) to one vote, or on bylaws, which restrict ownership of voting stock to one share per member. As a rule, State statutes place no limitations on participation in the corporation of any individual because of his occupation or profession. However, membership in such corporations can usually be limited or restricted through bylaws. Thus it is possible for those who are directly interested in the ownership and operation of a wholesale center to form a nonprofit corporation to construct and operate the market. An example of a nonprofit private corporation is the small business investment company set up under the U.S. Small Business Administration.

The Congress in 1958 passed the Small Business Investment Act, which established a program to stimulate the flow of private equity capital and long-term loans for the sound financing of the operations, growth, expansion, and modernization of small business concerns. Under this Act the Small Business Administration is authorized to make loans to so-called "State development companies" or to local development companies, and to license, regulate, and give financial assistance to privately organized, privately financed companies called "small business investment companies."

A development company may be either a profit or nonprofit enterprise incorporated under State law, with authority to promote and assist the growth and development of small businesses in specific areas. A

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[9] Clowes, Harry G., Elliott, William H., and Crow, William C. *Wholesale Food Marketing Facilities, Types of Ownership and Methods of Financing.* U.S. Dept. Agr. Mktg. Res. Rpt. 160, 96 pp., illus. 1957.

State development company is a corporation organized under a special legislative act to operate statewide. A local development company is a corporation with a broad base of ownership, formed under applicable State laws, to further the economic development of its communities.

The Small Business Administration is authorized to make loans to State and local development companies in exchange for obligations of the development company. It is also authorized to make loans for construction, conversion, or expansion of plants and for the acquisition of land. Such loans may be made either directly or in cooperation with banks or other lending institutions. Certain rules and regulations have been set up defining eligible business categories and needed collateral.

Public Benefit Corporation

Public benefit corporations, sometimes called "market authorities," offer some desirable features not found in other types of ownership. They differ from nonprofit corporations only in that they are publicly owned.

A public benefit corporation is a nonprofit agency. Rentals and other charges do not exceed the amount needed to pay the costs of operation, to amortize the original investment, and to maintain a limited contingency fund. Under public ownership the revenues would be considered as public funds and as such could not be paid to lessees as dividends. However, these funds might possibly be appropriated for other public uses while bonds remained outstanding, unless such funds were specifically committed to redemption of bonds.

Public benefit corporations usually have the power of eminent domain, which can be useful in the acquisition of a site. Such corporations usually finance market improvements through the sale of revenue bonds. This type of financing normally is not a full obligation of a State or a political subdivision. Since these revenue bonds are often tax exempt, the interest cost is lower. A public agency, such as a market authority, is more likely than some types of private ownership to provide for future expansion and to work toward the establishment of a complete wholesale food distribution center. A market authority may or may not be required to pay taxes to the community in which it is located.

Market authorities have certain limitations, especially in the financing and operation of the facilities. They have difficulty in raising funds through revenue bonds unless considerable equity funds are provided in some way or the bonds are guaranteed by the city, county, or State. Some State or city governments have appropriated part of the funds needed for land acquisition and original construction. The continuity of management may be dependent on the continuance of a State or municipal government administration in office. Generally market authorities do not have as complete freedom of operation as is possible under private ownership.

Direct Public Ownership

Many wholesale food market facilities have been financed, constructed, and operated by States, counties, or municipalities. Several States and some municipalities have enabling legislation covering the improvement or establishment of produce markets.

Direct State ownership and operation usually can be differentiated from ownership and operation by a State market authority by the methods of financing used and the delegation of authority made by the State legislature. Although some States have appropriated funds and otherwise assisted market authorities with financial problems, they do not usually underwrite the total cost of a market constructed by an authority, nor have the States always assumed responsibility for the operation of these markets.

Under direct State ownership, a market facility is financed in whole or in part by an appropriation of State funds. If the financing is not entirely by this method, the State usually is obligated for the remainder unless this balance is obtained through grants or donations. Also, the State is responsible for maintenance and other expense involved in the operation of a State-owned market.

States may finance, construct, and operate wholesale food market facilities because of enabling legislation. Several State legislatures consider that improved facilities will in themselves serve the public interest.

Municipal ownership of a wholesale food market is comparable in many of its basic aspects to direct State ownership. Some municipalities are authorized in their charters to construct and operate food markets. However, some city councils or commissions are not authorized to make appropriations from general funds in the city treasury for the construction of market facilities. Methods usually open to municipalities for financing a market program are (1) issuing municipal bonds, (2) issuing revenue warrants, and (3) obtaining loans from public corporations In most cities, issuing bonds for such purposes must be approved by a majority of the qualified voters in a referendum

Facilities constructed with municipal or county funds would necessarily be owned by the municipality or county, and rent would have to be paid by the tenants as long as the municipality or county continues to own the facilities.

Combinations of Financing

Because of the complexity of building large wholesale food distribution centers, some are financed by a combination of private and public funds Recent construction of a food distribution center in the Northeast typifies the possibilities of various combinations of financing

In Philadelphia the food distribution center was built partly by a nonprofit corporation and partly by private owners on land owned and put into condition for building by the city. The city subordinated its interest in the land so that the land could be used as equity in borrowing money for building construction. When the multiple-occupancy facilities were built, the development company leased the facilities to operating stock companies formed by the prospective tenants. At the end of 30 years all land and facilities will become the property of the city, except the parcels of land sold by the development company with the city's approval for construction of single-occupancy buildings

ESTIMATED INVESTMENT IN LAND AND FACILITIES

The initial investment in a wholesale distribution center involves two major components—land and facilities. These costs can vary considerably depending on the price of the site selected and the time of construction

Acquisition of a site is subject to negotiation, regardless of the assessed value or appraisal of actual valuation Parcels of land belonging to different owners may have to be assembled. Usually civic-minded citizens can obtain the necessary acreage at a reasonable cost, since such an industry is essential to the economy of the community. The estimates given in this report are only those involved in buying the land and constructing the facilities needed They do not include costs for additional facilities that may be built later in the expansion areas or the costs of access streets, water mains, and sewers, which are usually supplied by the city.

Land

In the Wilkes-Barre, Scranton area a representative price for industrial land in condition to build is $0.15 per square foot or about $7,000 per acre. However, actual land costs will depend on the site selected and sale conditions. Land values were obtained from local chambers of commerce, realtors, and cooperators on the study. Land costs in outlying areas will generally be lower than in more densely populated sections or where there is considerable commercial development.

Facilities

The estimated costs for facilities are based on 1971 construction indexes Buildings are of "light mill" type, generally described as being of steel frame construction with enclosing walls of masonry. The floors are cement finish, the interior walls are exposed masonry, and the ceilings are of exposed structure. Estimates include such items as general illumination and normal distribution of convenience power outlets, stairways, and restrooms. They do not include such items as specialized equipment or furnishings.

Railroad tracks and switches, paving, sewers, and floodlights are other facilities for which costs have been determined Architects' and engineers' fees, construction loan charges,and reserve funds have also been included.

Construction costs shown in this section should be used only as a guide in estimating the total costs of the market They are *NOT* intended to reflect firm estimates made by local architects and contractors.

The following tabulation shows the estimated costs of the facilities proposed. For more details concerning cost estimates, see Appendix IV. The estimated costs for land and facilities for the various wholesale food firms are summarized in table 8

Table 8.–Estimated investment costs of land and proposed facilities for 52 independent food firms, Wilkes-Barre and Scranton

Type of wholesale firm and facility	Land required	Estimated costs		
		Land	Facilities	Total
	Acres			
Fresh fruits and vegetables				
Multiple occupancy	14.16	$99,120	$2,908,219	$3,007,339
Single occupancy	4.98	34,860	966,307	1,001,167
Total	19.14	133,980	3,874,526	4,008,506
Meat and meat products				
Multiple occupancy	10.92	76,440	1,700,086	1,776,526
Single occupancy	15.71	109,970	3,869,345	3,979,315
Total	26.63	186,410	5,569,431	5,755,841
Groceries				
Multiple occupancy	5.02	35,140	998,291	1,033,431
Single occupancy	2.47	17,290	472,658	489,948
Total	7.49	52,430	1,470,949	1,523,379
Dairy and poultry products–multiple occupancy	1.20	8,400	237,653	246,053
Refrigerated storage–single occupancy	7.62	53,340	2,196,179	2,249,519
Fluid milk products–single occupancy	2.50	17,500	527,569	545,069
All commodities				
Multiple occupancy	31.30	219,100	5,844,249	6,063,349
Single occupancy	33.28	232,960	8,032,058	8,265,018
Total[1]	64.58	$452,060	$13,876,307	$14,328,367

[1] An additional 18.64 acres has been set aside for a large food processor for a total acreage of 83.22.

ESTIMATED CONSTRUCTION COSTS

Fresh Fruit and Vegetable Section

Multiple-occupancy facilities:	
Buildings (38 units, 30 by 100 ft.)	$1,771,560
Other facilities:	
Railroad trackage and switches	47,291
Paving	308,595
Sewers (storm and sanitary)	41,074
Street lighting	10,000
Sprinkler system	88,920
Total construction cost of buildings and other facilities	2,267,440
Associated construction costs:	
Architect's fee	136,046
Construction loan	240,349
Contingency allowance	264,384
Total building, other facilities, and associated construction costs	2,908,219

Single-occupancy facilities:	
Buildings (one, 40,000 sq. ft.)	584,000
Other facilities	
Railroad trackage and switches	16,534
Paving	108,429
Sewers (storm and sanitary)	14,434
Street lighting	4,000
Sprinkler system	26,000
Total construction cost of buildings and other facilities	753,397
Associated construction costs:	
Architect's fee	45,204
Construction loan	79,860
Contingency allowance	87,846
Total buildings, other facilities, and associated construction costs	966,307
Grand total	$3,874,526

Meat and Meat Products Section

Multiple-occupancy facilities	
Buildings (12 units, 30 by 100 ft.)	$1,003,512
Other facilities	
Railroad trackage and switches	24,718
Paving	237,879
Sewers (storm and sanitary)	31,587
Street lighting	3,000
Sprinkler system	24,804
Total construction cost of buildings and other facilities	1,325,500
Associated construction costs	
Architect's fee	79,530
Construction loan	140,503
Contingency allowance	154,553
Total buildings, other facilities, and associated construction costs	1,700,086
Single-occupancy facilities:	
Buildings (six, 167,300 sq. ft.)	2,442,580
Other facilities	
Railroad trackage and switches	63,597
Paving	342,322
Sewers (storm and sanitary)	45,553
Street lighting	14,000
Sprinkler system	108,745
Total construction cost of buildings and other facilities	3,016,797
Associated construction costs	
Architect's fee	181,008
Construction loan	319,781
Contingency allowance	351,759
Total buildings, other facilities, and associated construction costs	3,869,345
Grand total	$5,569,431

Grocery Section

Multiple-occupancy facilities	
Buildings (13 units, 30 by 100 ft.)	$606,060
Other facilities:	
Railroad trackage and switches	17,788
Paving	109,332
Sewers (storm and sanitary)	11,734
Street lighting	3,000
Sprinkler system	30,420
Total construction cost of buildings and other facilities	778,334
Associated construction costs:	
Architect's fee	46,700
Construction loan	82,503
Contingency allowance	90,754
Total buildings, other facilities, and associated construction costs	998,291
Single-occupancy facilities:	
Buildings (one, 19,200 sq. ft.)	280,320
Other facilities:	
Railroad trackage and switches	9,885
Paving	53,840
Sewers (storm and sanitary)	9,990
Street lighting	2,000
Sprinkler system	12,480
Total construction cost of buildings and other facilities	368,515
Associated construction costs	
Architect's fee	22,111
Construction loan	39,063
Contingency allowance	42,969
Total buildings, other facilities, and associated construction costs	472,658
Grand total	$1,470,949

Dairy and Poultry Products Section

Multiple-occupancy facilities	
Buildings (three units, 30 by 100 ft.)	$139,860
Other facilities:	
Railroad trackage and switches	7,822
Paving	26,112
Sewers (storm and sanitary)	3,476
Street lighting	1,000
Sprinkler system	7,020
Total construction cost of buildings and other facilities	185,290
Associated construction costs.	
Architect's fee	11,117
Construction loan	19,641
Contingency allowance	21,605
Total buildings, other facilities, and associated construction costs	237,653
Grand total	$237,653

Refrigerated Storage Section

Single-occupancy facilities	
Buildings[1] (one, 62,500 sq. ft.)	$1,500,000
Other facilities	
Railroad trackage and switches	19,257
Paving	165,946
Sewers (storm and sanitary)	22,084
Street lighting	5,000
Total construction cost of buildings and other facilities	1,712,287
Associated construction costs.	
Architect's fee	102,737
Construction loan	181,502
Contingency allowance	199,653
Total buildings, other facilities, and associated construction costs	2,196,179
Grand total	$2,196,179

[1] Includes insulation and cost of refrigeration equipment.

Fluid Milk Products Section

Single-occupancy facilities:	
Buildings (four, 22,800 sq. ft.)	$332,880
Other facilities:	
Paving	54,393
Sewers (storm and sanitary)	7,234
Street lighting	2,000
Sprinkler system	14,820
Total construction cost of buildings and other facilities	411,327
Associated construction costs:	
Architect's fee	24,680
Construction loan	43,601
Contingency allowance	47,961
Total buildings, other facilities, and associated construction costs	527,569
Grand total	$527,569

ESTIMATED ANNUAL COSTS AND REVENUE REQUIREMENTS

The revenue required to operate the proposed facilities could vary according to the methods chosen to finance the center. Should the sponsors of the center use the Industrial Development Authorities Act,[10] interest costs might be reduced.

In this report, two methods of financing the wholesale distribution center will be shown—Industrial Development Authorities Act (public) financing and private financing.

It is assumed that the market would be constructed as a single project with the exception of chain warehouses and the central energy plant. This assumption is not intended to suggest that this is the most desirable arrangement, nor is it intended to exclude other arrangements, it is used only as a means for estimating probable operating expenses in this report.

The annual costs of operating the wholesale distribution center include (1) management costs, (2) insurance, (3) maintenance and repairs, (4) real estate taxes, and (5) debt service. Total annual revenue required is then determined by these five items.

Management

Management costs are based on annual reports of other wholesale markets and estimates of such costs in the Wilkes-Barre, Scranton area. These costs are prorated among the wholesalers on the basis of the square footage of facilities occupied. Certain annual administrative costs are estimated as follows:

Manager (part-time)	$6,000
Auditing and legal service	2,500
Advertising and promotion	1,000
Office rental	1,500
Office supplies and equipment	800
Telephone and other communications	700
Contingency	1,300
Total	$13,800

It is assumed that initial promotional costs would be borne by the developer, local chambers of commerce, other appropriate city and State agencies, or other groups promoting an area industrial development. Management costs are flexible and depend on the need and services desired by the tenants of the center. It is further assumed that sanitation expenses and public protection would be provided by the municipal government until the market is established. At a later date the market may then find it feasible to establish its own solid waste disposal system (see Appendix II). To conserve funds the manager was given a part-time position during early stages of development.

Insurance

Insurance companies in the county and elsewhere provided the basis for the estimates of fire, extended coverage, and liability insurance (table 9).

Maintenance and Repairs

Maintenance and repairs were assumed to be one-half percent of the total cost of constructing buildings and other facilities. The rate was applied to all buildings and facilities. A 10-percent reserve is included to cover increases in management, insurance, or maintenance and repair costs (table 9).

Real Estate Taxes

It has been assumed that the wholesale food distribution center will pay taxes on land and facilities. Computations were based on an assessed value of 35 percent of total investment in land and facilities. Taxes were computed at a rate of $74.60 per $1,000 of assessed value. In addition, a 10-percent reserve fund was included to provide for possible increases in the current tax rate or reassessments. When a full year's tax payment has been accrued, this reserve fund could be discontinued. The total annual tax payment of the center is shown in table 10.

Debt Service

In this report the costs of the distribution center have been estimated with public financing under the terms of the Industrial Development Authorities Act and with private financing. Interest rates are projected at 5 percent with an amortization period of 25 years with Industrial Development Authorities Act financing. Annual amortization charges at an annual interest rate of 5 percent for 25 years would amount

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[10] See Appendix III for details concerning this Act.

Table 9.—Estimated annual income required for management, insurance, maintenance, and reserve for proposed wholesale food facilities, Wilkes-Barre and Scranton

Type of wholesale firm and facility	Management	Insurance	Maintenance and repairs	Reserve	Total
Fresh fruits and vegetables					
Multiple occupancy	$2,070	$17,821	$14,541	$3,443	$37,875
Single occupancy	690	5,921	4,832	1,144	12,587
Total	2,760	23,742	19,373	4,587	50,462
Meat and meat products					
Multiple occupancy	1,242	10,418	8,500	2,016	22,176
Single occupancy	2,760	23,711	19,347	4,582	50,400
Total	4,002	34,129	27,847	6,598	72,576
Groceries:					
Multiple occupancy	690	6,118	4,991	1,180	12,979
Single occupancy	414	2,896	2,363	567	6,240
Total	1,104	9,014	7,354	1,747	19,219
Dairy and poultry products—multiple occupancy	138	1,456	1,188	278	3,060
Refrigerated storage—single occupancy	1,518	13,458	10,981	2,596	28,553
Fluid milk products—single occupancy	414	3,233	2,638	629	6,914
All commodities					
Multiple occupancy	4,140	35,813	29,220	6,917	76,090
Single occupancy	5,796	49,219	40,161	9,518	104,694
Total	$9,936	$85,032	$69,381	$16,435	$180,784

to $70.95 per $1,000 of investment. For private financing, interest rates are projected at 7 percent with an amortization period of 25 years. Annual amortization charges at an annual interest rate of 7 percent for 25 years would amount to $85.81 per $1,000 of investment.

A debt service reserve is usually required by creditors. This reserve might be 10 percent of the annual amortization charge and might be discontinued when a full year's amortization charge is accumulated. Such a reserve fund has been included in the debt service costs.

In table 11 a comparison is made of the estimated annual income required for debt service to amortize the cost of the center with public financing under the terms of the Industrial Development Authorities Act and with private financing.

Table 10. -Estimated annual assessed value and income required for real estate taxes for proposed wholesale food facilities, Wilkes-Barre and Scranton

Type of wholesale firm and facility	Assessed value	Income required for taxes		
		Tax	Reserve	Total
Fresh fruits and vegetables:				
Multiple occupancy	$1,052,569	$80,416	$8,042	$88,458
Single occupancy	350,408	26,771	2,677	29,448
Total	1,402,977	107,187	10,719	117,906
Meat and meat products:				
Multiple occupancy	621,784	47,504	4,750	52,254
Single occupancy	1,392,760	106,407	10,641	117,048
Total	2,014,544	153,911	15,391	169,302
Groceries				
Multiple occupancy	361,701	27,634	2,763	30,397
Single occupancy	171,482	13,101	1,310	14,411
Total	533,183	40,735	4,073	44,808
Dairy and poultry products–multiple occupancy	86,119	6,579	658	7,237
Refrigerated storage–single occupancy	787,332	60,152	6,015	66,167
Fluid milk products–single occupancy	190,774	14,575	1,458	16,033
All commodities:				
Multiple occupancy	2,122,173	162,133	16,213	178,346
Single occupancy	2,892,756	221,006	22,101	243,107
Total	$5,014,929	$383,139	$38,314	$421,453

Table 11 –Comparison of estimated annual revenue required with public and private financing for payment of debt service for proposed wholesale food facilities, Wilkes-Barre and Scranton

Type of wholesale firm and facility	Investment in land and facilities	Amortization charges		Reserve		Total revenue	
		Public financing	Private financing	Public financing	Private financing	Public financing	Private financing
Fresh fruits and vegetables							
Multiple occupancy	$3,007,339	$213,371	$258,060	$21,337	$25,806	$234,708	$283,866
Single occupancy	1,001,167	71,033	85,910	7,103	8,591	78,136	94,501
Total	4,008,506	284,404	343,970	28,440	34,397	312,844	378,367
Meat and meat products							
Multiple occupancy ..	1,776,526	126,045	152,444	12,605	15,244	138,650	167,688
Single occupancy	3,979,315	282,332	341,465	28,233	34,147	310,565	375,612
Total	5,755,841	408,377	493,909	40,838	49,391	449,215	543,300
Groceries							
Multiple occupancy	1,033,431	73,322	88,679	7,332	8,868	80,654	97,547
Single occupancy	489,948	34,762	42,042	3,476	4,204	38,238	46,246
Total	1,523,379	108,084	130,721	10,808	13,072	118,892	143,793
Dairy and poultry products-- multiple occupancy	246,053	17,457	21,114	1,746	2,111	19,203	23,225
Refrigerated storage– single occupancy	2,249,519	159,603	193,031	15,960	19,303	175,563	212,334
Fluid milk products– single occupancy	545,069	38,673	46,772	3,867	4,677	42,540	51,449
All commodities'							
Multiple occupancy	6,063,349	430,195	520,297	43,020	52,029	473,215	572,326
Single occupancy	8,265,018	586,403	709,220	58,639	70,922	645,042	780,142
Total	$14,328,367	$1,016,598	$1,229,517	$101,659	$122,951	$1,118,257	$1,352,468

ESTIMATED ANNUAL REVENUE REQUIRED

Table 12 shows the estimated annual revenue required to operate and finance the proposed wholesale distribution center using public (Authority) and private financing. Included in the estimate are costs for management, maintenance, insurance, real estate taxes, and debt service.

The amount of annual revenue required for public financing and operation would be over $230,000 less than for private financing and operation. Some of the costs will remain the same regardless of the organization (private, public (Authority), or a combination of the two) financing the food distribution center. Management, insurance, maintenance, and repair costs would be about the same, but substantial savings might be realized in the costs of both taxes and debt service by public financing and operation. The amortization and reserve would be less and real estate taxes might be about half that of private financing, assuming 50-percent payment in lieu of taxes.

Table 12.–Estimated total annual revenue required with public and private financing to operate proposed wholesale food facilities, Wilkes-Barre and Scranton

Type of wholesale firm and facility	Annual revenue required with– Public financing	Annual revenue required with– Private financing
Fresh fruits and vegetables:		
Multiple occupancy	$361,041	$410,199
Single occupancy	120,171	136,536
Total	481,212	546,735
Meat and meat products:		
Multiple occupancy	213,080	242,118
Single occupancy	478,013	543,060
Total	691,093	785,178
Groceries:		
Multiple occupancy	124,030	140,923
Single occupancy	58,889	66,897
Total	182,919	207,820
Dairy and poultry products–multiple occupancy	29,500	33,522
Refrigerated storage–single occupancy	270,283	307,054
Fluid milk products–single occupancy	65,487	74,396
All commodities:		
Multiple occupancy	727,651	826,762
Single occupancy	992,843	1,127,943
Total	$1,720,494	$1,954,705

SOURCE OF REVENUE

The revenue required to support any wholesale market must be obtained from rents and charges for use of facilities. Rental charges are based on the total computed cost. An annual rent of $1,720,494 would be required with public (Authority) financing and $1,954,705 with private financing (table 12). The rentals shown in table 13 will adequately cover costs and reserves.

In some markets certain costs have been reduced or eliminated when some of the required revenue was derived from other sources. For example, utility companies may install lighting in parking areas or provide other services to individual warehouses without charging tie-in or installation fees. Railroads may provide the lead-in trackage or switches on site at no additional cost. Should these or other agencies in Wilkes-Barre and Scranton supply these services, costs would be reduced.

Table 13.—Estimated annual rentals required with public and private financing to produce total revenue to operate proposed wholesale food facilities, Wilkes-Barre and Scranton

Type of wholesale firm and facility	Floor space	Rent per square foot[1] with— Public financing	Rent per square foot[1] with— Private financing
	Sq ft		
Fresh fruits and vegetables:[2]			
Multiple occupancy	136,800	$2.64	$3.00
Single occupancy	40,000	3.00	3.41
Total or average	176,800	2.72	3.09
Meat and meat products:[3]			
Multiple occupancy	69,120	3.08	3.50
Single occupancy	167,300	2.86	3.25
Total or average	236,420	2.92	3.32
Groceries:			
Multiple occupancy	46,800	2.65	3.01
Single occupancy	19,200	3.07	3.48
Total or average	66,000	2.77	3.15
Dairy and poultry products—multiple occupancy	10,800	2.73	3.10
Refrigerated storage—single occupancy	62,500	4.32	4.91
Fluid milk products—single occupancy	22,800	2.87	3.26
All commodities:			
Multiple occupancy	263,520	2.76	3.14
Single occupancy	311,800	3.18	3.62
Total or average	575,320	$3.00	$3.40

[1] Based on total annual revenue required as shown in table 12.
[2] Includes mezzanine.
[3] Includes insulation, meat rails, and grease traps.

BENEFITS AND CONCLUSIONS

Many food wholesalers in the Wilkes-Barre, Scranton area use outmoded, inefficient methods in their handling operations. Their old, outdated facilities do not permit them to use modern, efficient methods. A new, well-planned wholesale food distribution center would have the necessary type, size, and amount of facilities needed by the wholesalers to provide the kinds of food handling required in the area for both now and the future.

Such a center, however, would not be expected to bring about immediate overall net savings in food marketing costs, even though some individual firms may realize savings immediately. Net savings throughout the entire center are not likely to accrue until after a greater total volume of business has been developed in the center.

At the outset certain specific cost items would be higher in a new center than they are now in the old facilities. Others would be lower. Rent, for example, would be higher, but no newly constructed facility is likely to be able to offer its tenants lower rents than they pay in old facilities. However, construction costs and subsequent rental costs can be reduced considerably by building new facilities all together at one place at one time instead of building them separately at different places and different times.

Table 14 shows that annual rental costs increase from about $1,050,000 to about $1,240,000 depending on the method of financing used. But one point should be recognized concerning these estimates. They do not take into consideration the market or salvage value of the present facilities and land of the food wholesalers. Conceivably they do have market value, and this value could help defray the investment capital requirements for the new facilities and thereby permit rents to be lower.

Product handling, spoilage, deterioration, shrinkage, and refrigeration are examples of cost items that could be lower in new facilities. Lower product handling cost would come from greater efficiency in moving products to the facilities, handling them within the facilities, and then loading them into vehicles preparatory to distribution. Table 15 shows an estimated savings of $195,000 annually from lower handling costs. Product spoilage, deterioration, and shrinkage could be reduced with better refrigeration and less handling. Reductions in these costs are estimated to be $338,000 a year (table 16).

The cost of refrigeration can be reduced through

Table 14.–Estimated annual ownership costs for proposed wholesale food facilities assuming public and private financing, Wilkes-Barre and Scranton[1]

Type of wholesale firm	Annual volume incurring costs	Present rent	Proposed rent with–					
			Public financing			Private financing		
			Per ton	Total	Increase	Per ton	Total	Increase
	Tons							
Fresh fruits and vegetables	80,305	$118,851	$5.99	$481,152	$362,301	$6.82	$548,080	$429,229
Meat and meat products	34,987	153,680	19.76	691,368	537,688	22.43	784,914	631,234
Groceries	15,014	57,600	12.19	182,964	125,364	13.85	207,900	150,300
Dairy and poultry products ..	818	5,162	36.04	29,484	24,322	40.93	33,480	28,318
Total or average	131,124	$335,293	$10.56	$1,384,968	$1,049,675	$12.01	$1,574,374	$1,239,081

[1] Public refrigerated storage warehouse and fluid milk products plant not included in this table but are included in the master plan (fig. 25).

Table 15.–Estimated annual savings in handling costs for proposed wholesale food facilities, Wilkes-Barre and Scranton[1]

Type of wholesale firm	Annual volume incurring costs	Handling costs[2]			Reduction
		Present	Proposed		
			Per ton	Total	
	Tons				
Fresh fruits and vegetables	80,305	$435,253	$3.40	$273,037	$162,216
Meat and meat products	34,987	323,289	8.87	310,357	12,932
Groceries	15,014	124,166	7.28	109,301	14,865
Dairy and poultry products	818	14,413	12.33	10,085	4,328
Total or average	131,124	$897,121	$5.36	$702,780	$194,341

[1] Public refrigerated storage warehouse and fluid milk products plant not included in this table but are included in the master plan (fig. 25).

[2] Data obtained by interviewing individual wholesalers.

Table 16.–Estimated annual savings in spoilage, deterioration, and shrinkage costs for proposed wholesale food facilities, Wilkes-Barre and Scranton[1]

Type of wholesale firm	Annual volume incurring costs	Spoilage, deterioration, and shrinkage costs[2]			Reduction
		Present	Proposed		
			Per ton	Total	
	Tons				
Fresh fruits and vegetables	80,305	$578,196	$3.60	$289,098	$289,098
Meat and meat products	34,987	88,866	1.27	44,433	44,433
Groceries	15,014	33,931	2.00	30,028	3,903
Dairy and poultry products	818	360	.44	360	0
Total or average	131,124	$701,353	$2.78	$363,919	$337,434

[1] Public refrigerated storage warehouse and fluid milk products plant not included in this table but are included in the master plan (fig. 25)

[2] Estimates calculated on average value loss per ton as determined by commodity specialists

using a single centralized refrigeration system. When compared to the cost for each wholesaler to buy and operate his own individual system, a centralized system is estimated to cost only about 60 percent as much each year to own and operate (table 17). A major advantage of the centralized system is that it provides for heat and air conditioning, which are not included in the individual systems. A centralized system offers additional advantages to the individual food firms in that it eliminates the need for them to raise capital investment funds for refrigeration equipment and the responsibility of upkeep and repair of the equipment.

Other savings probably would be made by four fluid milk firms as well as by one food chain and one large frozen food processor, who are contemplating expansion of present operations.

Table 17.--Estimated annual ownership and operating costs of individual and centralized refrigeration systems for proposed wholesale food facilities, Wilkes-Barre and Scranton

Type of wholesale firm	Individual system[1]	Centralized system[2]	Cost difference
Fresh fruits and vegetables . .	$186,684	$115,017	$71,667
Meat and meat products	432,848	266,680	166,168
Groceries	39,181	24,139	15,042
Dairy and poultry products . .	8,776	5,407	3,369
Refrigerated warehouse and fluid milk products . . .	218,951	134,897	84,054
Total	$886,440	$546,140	$340,300

[1] Assumes wholesale firm is located in individual facility with its own refrigeration system; does not include heat and air conditioning.

[2] Assumes that wholesale firm is located in food distribution center and receives its refrigeration from a central plant; includes heat and air conditioning.

Some benefits will occur immediately. They are not measurable in dollars and cents, but they will have a definite beneficial effect on the system of handling and distributing food in the area. They include modern, clean, and pleasant surroundings in which to handle food; room for expansion where individual firms can grow and where new firms and allied industries can be located; proper facilities for employees working at the center and for others who visit it; adequate and convenient parking for all cars and trucks; improved protection from vandalism and theft; better insurance coverage; and community pride in the local food industry.

APPENDIX I

Guides to Planning Interior Operational Layouts

Several general principles should be considered when planning interior layouts. Plans for an efficient layout are essential before construction to determine the locations of (1) insulation for refrigerated areas, (2) electrical outlets and utilities control panels, (3) lighting fixtures, (4) equipment servicing areas, (5) pallet racks, (6) drains, (7) thermostats, (8) columns, and (9) removable walls or partitions for future expansion.

These plans should be based on the following principles:

(1) *Maximum space.*—Making full use of the storage cube by using racks to hold the pallets of merchandise in tiers.

(2) *Rapid flow of products.*—Storage areas, platforms, doors, and aisles should be planned to provide access to the storage areas in the least amount of time and with the maximum use of space. Items having the most rapid turnover should travel the shortest distances.

(3) *Flexibility of space use.*—In an industry undergoing rapid technological advancements such as the food industry, flexibility is highly desirable. Large open areas with minimum obstructions will help provide this flexibility. In the storage areas, four-way entry pallets and adjustable pallet racks offer further flexibility.

(4) *Protection of product quality*—Maintaining the quality of food is essential. Handling systems that minimize the number of times that products are handled and the distance they are transported reduce the possibility of physical damage during handling. Refrigeration facilities that maintain the proper temperature and humidity for specific perishable foods help prolong product quality.

(5) *Future expansion.*—Facilities must be planned so they can be expanded or they may soon become obsolete. Expansion needs are estimated, but they are based on expected growth rates of various businesses or individual firms. Planning for the expansion of refrigerated areas is of primary concern because of insulation requirements.

(6) *Supervision and control.*—The amount of supervising required, including the labor force to be directed and the area to be serviced, should be considered in designing the interior arrangement. The supervisor must keep waste, deterioration, and pilferage at a minimum and exert maximum control over the employees

(7) *Safety and comfort of employees.*— Adequate lighting, temperature control, and welfare facilities should be planned for the comfort of employees A complete safety program should be incorporated into the layout This program should include such features as protective guards on material-handling equipment, traffic signs strategically located, planned passageways for foot traffic, and fire preventive measures.

Recommended Handling Systems

To achieve maximum economy from new facilities, efficient internal handling operations are necessary. A palletized handling system would meet the requirements for moving and storing packaged products from most firms. To make full use of the storage space, adjustable pallet racks three tiers high are recommended. Each vertical rack support should have a 4- by 5-inch metal base plate to act as a weight distributor. For greater density of storage, drive-in and drive-through pallet racks are suggested instead of conventional pallet racks. Adjustable, clamp-type racks are recommended because they are easy to assemble and disassemble and offer flexible shelf height. The bottom tier of pallets should be used for product display and selection and the upper tiers for replacement and storage It is advisable to formulate a stacking pattern for each item to be palletized. Interlocking patterns that allow air circulation through the load for nonfrozen refrigerated items are necessary. Stacking heights on pallets will vary with the commodity and the size of package They will generally be determined by the stability of the load and the ability of the bottom layer to withstand the load above it.

For quantities too small to palletize, adjustable storage shelves are suggested

Large-volume dealers should use forklift trucks to transport pallet loads. These trucks should be equipped with overhead guards and load backrests and should be powered by batteries. The load capacity of the forklift truck should be determined by the largest weight it will be required to transport. Narrow-aisle, straddle forklift trucks would be satisfactory for relatively short hauls, but the heavier duty, counterbalance forklife trucks would be more satisfactory for longer hauls. Patience and skill should be exercised in training forklift operators. Good training is certain to pay dividends in shorter operating hours and in correct care of products and equipment.

Planning should include space and equipment sufficient to absorb a projected increase in the firm's volume. This kind of planning will provide a long-range economic advantage in a competitive industry such as the food industry.

Four-wheel handtrucks are recommended for small-volume dealers in assembling orders. For large-volume dealers who select orders in large lots, mechanized equipment should be used.

These are general recommendations that will vary from dealer to dealer depending on each dealer's volume of business and type of operation. Firms handling a very small volume would not need to use power equipment for handling operations, instead they could use semilive skids and pallet jacks. Other small-volume dealers could form equipment pools or rent equipment so as to hold down the initial equipment investment costs. Extremely large-volume dealers would employ more sophisticated mechanized operations.

APPENDIX II

The following excerpts were taken from Solid Waste Disposal Recommendations.[1]

(1) The manager of the food distribution center should be delegated full responsibility for solid waste management at the center. As a part of this responsibility, he should be authorized to administrate all waste collection services provided tenants, to contract with private firms for solid waste collection and disposal services, or to establish center capability in terms of labor and equipment to provide for solid waste collection and disposal as required.

(2) Each tenant of the center should be provided with and required to use the proper type and number of waste storage containers based on the volume of waste generated. Tenant containers should be uniform in size and design throughout the center and be serviced a minimum of twice each week. Tenants generating larger volumes of waste should use additional containers or have their containers serviced more frequently.

(3) Wastes from center restaurants should be collected daily and from administrative offices once a week.

(4) Waste storage containers should be located as near the point of waste generation as is practical. The rear dock area is convenient for tenant use and for collection service accessibility.

(5) Collection of waste from elevated and street-level rear dock areas should be made using a front-end loading packer vehicle. Waste containers should be of the metal bin type equipped with casters and lift handles to facilitate movement by tenants and mechanical loading.

(6) When a suitable location exists at the center, the installation of a stationary compactor should be given careful consideration by market management. Use of a pickup truck or small three-wheeled collection vehicle is recommended for transporting tenant wastes to the compactor if it cannot be readily accessible to tenant dock locations. Self-dumping containers should be used for storage of tenant wastes with this method.

(7) Because of high costs and increasingly stringent air-pollution control regulations, the installation of an incinerator for disposal of center wastes is not recommended.

(8) Several large containers of 4- to 6-cubic-yard capacity should be located on the center premises and truckers encouraged to dispose of packing wastes into these containers. The gate watchman should be alerted to prevent truckers from bringing more than the required quantity of packing wastes into the center with their produce loads.

(9) Tenants processing or preparing produce for packaging and center restaurants should be encouraged or required, local regulations permitting, to install a garbage grinder for disposal of food wastes directly into the sewer system. Installation of these units during new center construction is recommended.

(10) Center regulations should require that dunnage originating from railroad cars be transported either to the tenants' waste storage container or to one of the large containers located for truckers' use (see 8 above). Appropriate penalties should be

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[1] For a detailed analysis of solid waste management systems, see Volz, Marvin D., "Solid Waste Management in Wholesale Food Distribution Centers", U.S. Dept. Agr. Mkgt. Res. Rpt. [In press.]

assessed those persons observed sweeping railcar dunnage onto the ground

(11) The streets and other paved areas of the center should be swept at least twice weekly with a mechanical street sweeper. To facilitate this cleaning activity, all trucks and piggyback trailers should be parked away from the dock on designated days (during night sweeping hours). Perimeter fences of the center should be kept weed free and cleaned of litter periodically

(12) The center should consider the purchase of equipment and the hiring of labor to provide solid waste collection and disposal service for tenants.

(13) If the center wishes to evaluate establishing its own solid waste collection and disposal operation, a careful planning and evaluation period is recommended. A competent consulting engineer experienced in solid waste management should be retained to evaluate center conditions and recommend the proper equipment and waste management system components for consideration. Cost estimates for service submitted by qualified private haulers should be included in the evaluation process.

(14) Preparation of detailed specifications governing the services to be provided by the private hauler is recommended. Competent legal advice is needed to prepare this specification.

(15) It is recommended that the contract with the private hauler be with the center and not with the individual tenants All authorization for and payments to the hauler should be from the manager or other designated center representative.

APPENDIX III

Industrial Development Authorities Act

The Industrial Development Authorities Law was enacted on August 23, 1967. It represents a direct attempt by the executive and legislative branches of the State Government to meet the keen competition of other States for new industries through revenue bond or other financing programs.

The general purpose of the Law based on the findings and declaration of legislative policy is set forth in Section 2. Industrial Development Authorities "shall exist and operate for the public purpose of alleviating unemployment, maintaining employment at a high level, creating and developing business opportunities by the construction, improvement, rehabilitation, revitalization and financing of industrial, manufacturing, research and development enterprises." The Law is designed to promote the "health, safety, morals, employment, business opportunities and general welfare of the people."

The membership and tenure of the Authority boards are described in Section 9 (a). Section 9 (b) covers vacancies, resignations, and removals. Section 9 (c) discusses constitution of a quorum.

Definitions of terms used in the Law are to be found in Section 3.

The method of incorporation is covered in Section 4. The general purposes and powers of every Authority are discussed in Section 6. These powers cover ability to sue, be sued, make agreements and contracts, make appointments, to acquire, purchase, hold, and lease property, to borrow money by the issuance of bonds of the Authority, or by other means.

The Authority may borrow money but may not pledge the credit or taxing power of the Commonwealth or any political subdivisions thereof. Provision of cooperation with Federal agencies is found in Section 6 (b)-12.

Section 6 (d)-1 excludes an Authority from the participation in an industrial development project which shall cause the removal of a manufacturing, industrial, or research plant, facility, or establishment from one area of the Commonwealth of Pennsylvania to another area of the Commonwealth. Other restrictions are found in Sections 6 (d)-2, d-3, d-4, and d-5.

Section 10 offers directions as to fiscal affairs of the handling of cash and this also provides for the examination and audit of the Authorities' affairs.

Criteria for Approval of Application

Since it assumed an active role in sponsoring the Industrial Development Authorities Law, the Pennsylvania Department of Commerce has a special obligation and responsibility to insure that all projects established pursuant to the Law are fully responsive to the public interest. Specifically the Act requires the Secretary of Commerce to approve the proceedings relating to each project to be established and to make certain determinations in respect thereto. In undertaking the foregoing responsibilities and in making the required determinations, the following factors, among others, will be considered by the Secretary:

(1) The agreements between the Authority and the Industrial Occupant should provide—

(a) For the payment of an amount equal to the ad valorem taxes and, where applicable, special assessments levied for public improvements, and should provide for a procedure to insure the prompt remission of said amounts to the proper taxing bodies, and

(b) That in the event the Industrial Occupant purchases any of the bonds issued to construct a project, said bonds shall be turned in for cancellation, and the rentals or other installment payments to be paid by the Industrial Occupant shall be appropriately reduced.

(2) All projects must meet the requirements of State regulatory agencies, as for example, the Sanitary Water Board, Department of Labor and Industry, and Department of Health.

(3) In determining whether a project causes a removal under Section 6 (d)-1 of the Act, covering construction or financing of a project which shall cause the removal from one area of the State to another area, loss of present employees will be considered significant evidence of a removal. Generally speaking, a move within county lines will not be deemed a removal.

(4) While the creation of new jobs and payrolls is always desirable, the absence of these factors will not necessarily be determinative of approval of a project. Certainly preservation of existing employment can be of equal importance. In addition to these factors, the overall economic impact of a project will be considered to determine if the public purposes of the Act are being accomplished.

To provide the material necessary to make the required determinations, the following information and documents should be presented to the Secretary of Commerce under the signature of the Chairman of the Authority, certified by him, with seal of the Authority affixed:

(1) A general statement of the project which shall include—

(a) A history of the Industrial Occupant, location of existing plants, financial statements for 3 prior years, principal officers, products, and its subsidiaries and affiliates.

(b) A description of the proposed project, estimates of all costs in connection therewith, method of financing, method of construction, the number of jobs to be created, and total payrolls.

(c) A certification by the Chairman of the Authority and an authorized officer of the Industrial Occupant that the project will not cause the removal of a plant, facility, or establishment from one area of the Commonwealth to another, that the project is not in violation of Sections 6 (d) (2), (3), or (4) of the Act. These are sections covering refinancing and improvement of existing facilities, financing in excess of project cost, and financing of machinery or equipment in conjunction with the construction of a new or the improvement of an existing industrial project, and that the Authority is not engaging in business, trade, or commerce.

(d) A statement by the Chairman of the Authority that the lease or sales agreement provides for the payment of ad valorem taxes.

(2) Under the revenue bond provision of the Law there shall be submitted to the Secretary the following documents which shall be conformed or shall be in final form ready for execution.

(a) The preliminary or agreement of intent between the Authority and the Industrial Occupant, if any.

(b) The lease or sales agreement.

(c) Sublease, if any.

(d) A copy of the note or bonds to be issued evidencing the debt

(e) A copy of the mortgage or trust indenture securing the note or bonds.

(f) The prospectus or bond purchase agreement, if any.

(g) A statement by an authorized officer of the Industrial Occupant that the project will not cause the removal of a plant, facility, or establishment of the Industrial Occupant from one area of the Commonwealth to another.

(h) Such other documents as may be necessary for the Secretary to make the determination required by the Act.

(3) Under the mortgage provision of the Law there shall be submitted to the Secretary the following documents:

(a) Transmittal letter.

(b) Project Detail Statement.

(c) History of Industrial Occupant.

(d) Resolution of Authority approving transaction.

(e) Copy of letter of Commitment from lending institutions setting forth details of financing.
(f) Certification of Authority
(g) Certification by Industrial Occupant as to nonremoval from one area of the Commonwealth to another
(h) Such other documents as may be necessary for the Secretary to make the determination required by the Act[2]

APPENDIX IV

Buildings and Facilities Cost Data

Multiple- and single-occupancy building costs are estimated at $14.60 per square foot. Mezzanine space in multiple-occupancy buildings is estimated at $4.70 per square foot. Costs are based on Reading, Pa., Building Index, August 1971, steel and masonry construction. Basic construction costs are developed from a contractor's report prepared for the U.S. Department of Agriculture entitled, "Design and Construction Costs of Multiple-Occupancy Wholesale Food Facilities," April 1969, Abreu and Robeson, architects and engineers, Atlanta, Ga., and from information supplied by local architects and engineers in the Wilkes-Barre, Scranton area and confirmed by appropriate city authorities.

Costs of other facilities are as follows:

Trackage.—House and lead-in tracks are estimated at $16.50 per linear foot. Estimates include a prorated share of lead-in tracks to the user. Railroad switches are estimated at $4,720 per switch. The cost of tracks and switches is based on recent construction in the Wilkes-Barre, Scranton area and confirmed by local rail agencies serving the area.

Paving.—Asphalt paving is estimated at $5.95 per square yard. Estimates include allocated share of streets and parking area. Paving specifications should conform to those established by the Asphalt Institute.

Sewers.—15-inch storm sewers are estimated at $11.90 per linear foot and 12-inch sanitary sewers at $9.95 per linear foot. Sewer costs are computed on a prorated basis for the amount of facilities being served.

Street lights.—Street lights are estimated at $1,000 each completely installed. Installation costs for specific floodlights on single poles depend on the electrical facilities available at the site. Installation is free provided secondary transformer facilities are available within 150 feet of the connection. Cost is computed on a prorated basis for the amount of facilities being served.

Sprinkler systems.—The cost of sprinkler systems is estimated at $0.65 per square foot for nonrefrigerated areas only. The cost was provided by manufacturers in the Wilkes-Barre, Scranton area specializing in this type of equipment

Associated Construction Costs

Associated construction costs are estimated as follows: Architect's fee, 6 percent of building and facilities cost; construction loan, 10 percent of building and facilities cost and architect's fee; contingency allowance, 10 percent of building and facilities cost, architect's fee, and construction loan. The contingency allowance may be discontinued when a sufficient reserve has been acquired

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[2] Industrial Development Authorities Law, Act of August 23, 1967 Department of Commerce, Commonwealth of Pennsylvania

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